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THE BRAVA AND HIS EDUCATIONAL PROBLEMS  
IN  
MARION, MASSACHUSETTS

"Educating The Brava"

A Thesis Presented for the Degree of  
Master of Education

by

Joseph R. McInnes

B. S. in Ed.

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Boston University

1942

First Reader: Herbert Blair, Professor of Education

Second Reader: Roy O. Billett, Professor of Education

Third Reader: W. L. Hanson, Professor of Education

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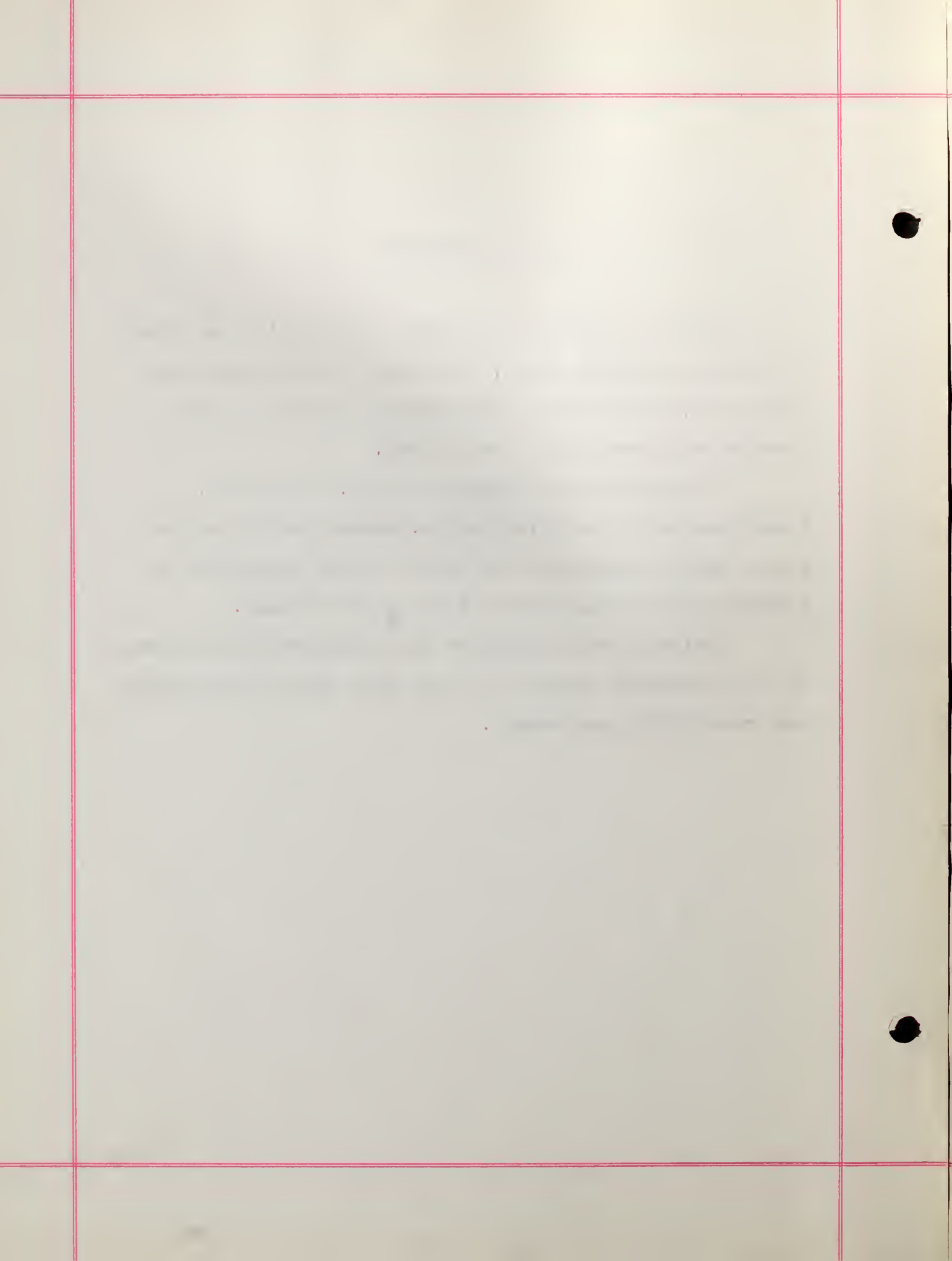


## ACKNOWLEDGEMENTS

I wish to express my sincere appreciation and thanks to Professor Herbert Blair, Professor of Education Boston University, for his keen criticism and guidance in the planning and execution of this study.

I am particularly indebted to Mr. John Glenn, Superintendent of Schools, Marion, Massachusetts and the Marion School Department for their helpful assistance in securing the data upon which this study is based.

Grateful acknowledgement and appreciation is extended to Miss Katherine Kenealy, for her many helpful suggestions and stenographic assistance.



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## CHAPTER I

### INTRODUCTION AND PURPOSE OF THE STUDY.

An endeavor has been made to collect certain data pertaining to the Brava problem in Marion, Massachusetts, to determine what major educational problems confront the Brava and what provisions should be made in the school program of Marion for these Portuguese boys and girls who constitute a greater per cent of the school enrollment each successive year (graph--2).

It is a problem which is very pertinent and urgent here in that the number of Brava pupils enrolled in the schools has been constantly increasing (graph--1). All facts and data ascertained are based upon the conditions in this community. It is pertinent also to a greater or less extent in other Cape Communities. Although large Cape Verdean centers are present principally in such towns as Marion, Wareham, Falmouth, Harwich and Provincetown, all the towns of the Cape have island Portuguese as members of their communities.

The town of Marion is located on Cape Cod approximately sixty miles from Boston, Massachusetts. It has a total population of 2030; of this number about 40 % are Bravas or Cape Verdeans.

The Cape Verdean Island group form an archipelago

# THE HISTORY OF THE CITY OF BOSTON

The history of the city of Boston is a subject of great interest and importance. It is a city of many centuries, and its history is full of interesting incidents and events. The city was founded in 1630, and has since that time been a center of commerce and industry. It has been the seat of many important events, and has played a large part in the history of the United States. The city is now one of the most important cities in the world, and its history is a subject of great interest to all who are interested in the history of the United States.

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300 miles off the west coast of Africa and constitute part of the Portuguese Colonial Empire. The name is derived from the African promontory off which they lie, known as Cape Verde or the green cape. (7, pp.791--792) (16, pp.1249--1250).

The first settlers on the islands imported negroes from the African coast, principally for the development of the slave trade with America and for the tilling of the near-marginal lands of the islands.

The slave population increased annually until 1854 when the government freed the public slaves and ameliorated their living conditions by the introduction of private ownership. In 1857 arrangements were made for the abolition and by 1876, the last slave was freed. (16, pp.1249--1250) (13,editorial).

Thus, we see that the island Portuguese, from which localities the United States receives the greatest number of Portuguese immigrants, have received more than a negligible infusion of negro blood. Immigrants to the United States from the Cape Verde Islands have been classified as "colored" by the Massachusetts and Federal Censuses since 1915. (17, pp.49--57).

There seems to be a difference of opinion in regard to the manner in which the Black Portuguese arrived in America, (New Bedford).





Since the first whale ship stopped at the harbor of Fayal, in the island of Brava, for water and took on board one of the natives, the tide of immigration from these islands has set this way. Later, whale ships which put out of New Bedford with skeleton crews brought back natives as part of the ship's company. (13, editorial).

In almost every case, New Bedford was the destination of the emigrating Cape Verdeans. New Bedford was the first city in the United States that these people knew anything about, and while, in later years, some of the packets made Providence their port of entry, New Bedford remained the city of the new world for the people of the Cape Verde Islands. (13, editorial).

Many of the immigrants have remained in New Bedford. Numbers migrated to outlying districts, the majority to the cranberry districts of Cape Cod and the towns of Barnstable County. (13, editorial).

The cranberry crop and the Portuguese may be considered as one. Owners, desirous of cheap labor to harvest their crops and care for their bogs, soon recognized the Portuguese as the means to an end. As one bog owner states, "Their (Cape Verdean) labor is cheap, not so much because of the wages they are paid, but rather because of the type of work they will do." (12, Long's thesis, p. 11).

Thus, we have in brief the history of the Brava. The problem of this group is becoming more acute and some

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solution must be found. Therefore, it shall be the purpose of this thesis to analyse the situation as it exists in Marion, Massachusetts, and to suggest possible solutions and remedies.



## CHAPTER II

### SCHOOL STATISTICS

An endeavor has been made to collect such statistics as seemed pertinent to a solution of the Brava problem in Marion, Massachusetts.

A brief description of how the work was carried on follows: school registers, permanent record cards and the reports of the Marion School Department as they appeared in the Marion Town Report (1930--1940) were consulted. The total enrollment of each group was tabulated as to number and per cent for a period of 11 years (1930--1940). The histories or progress of successive classes was traced to determine the increase or decrease in membership and the per cent of yearly retention in each grade each year. Graphs have been made to determine in what grades the greatest per cent of retention has taken place over a period of years.

Throughout the study the Brava pupils are listed and tabulated separately, since information was sought about them and since the White group is used as the control group.

# THE SUNSHINE

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OF ALL THINGS THAT WE CAN SEE

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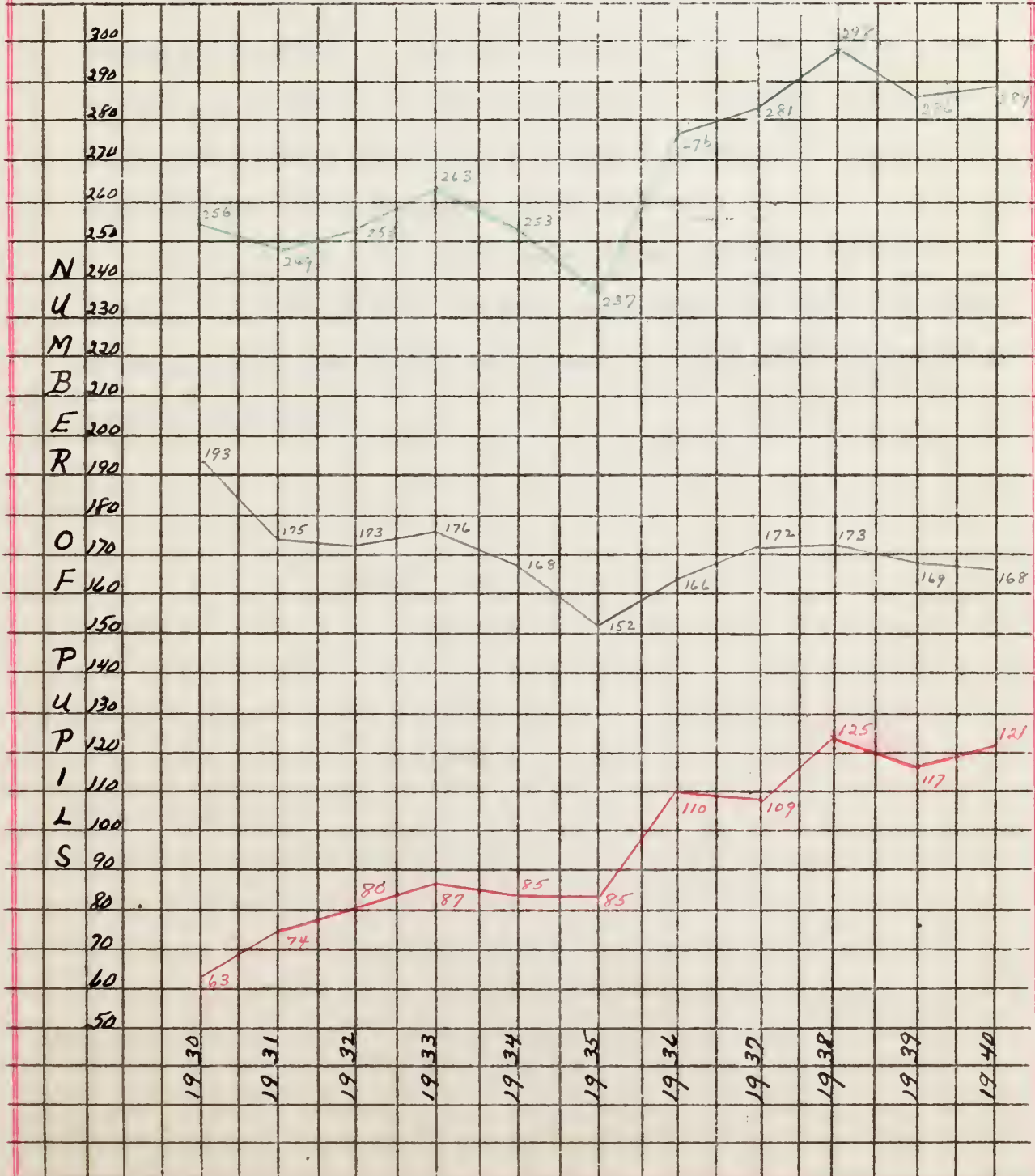
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GRAPH 1

THE WHITE, BRAVA AND TOTAL ENROLLMENT IN THE PUBLIC SCHOOLS  
OF MARION, MASSACHUSETTS 1930--1940.

(The data are collected as of the total enrollment for each year)





Graph 1 shows the total enrollment for the schools, the White and the Brava enrollment for each year for a period of eleven years (1930--1940).

Over this period of years the Brava enrollment increased gradually, showing at the end of the eleven year period an increase in enrollment of 58 members; while the White enrollment decreased gradually showing at the end of the same period a decrease of 25 members.

In 1930 out of a total enrollment of 256, 63 were Bravas; in 1940 out of a total enrollment of 289, 121 were Bravas. Thus, the Brava enrollment is gradually approaching that of the White.

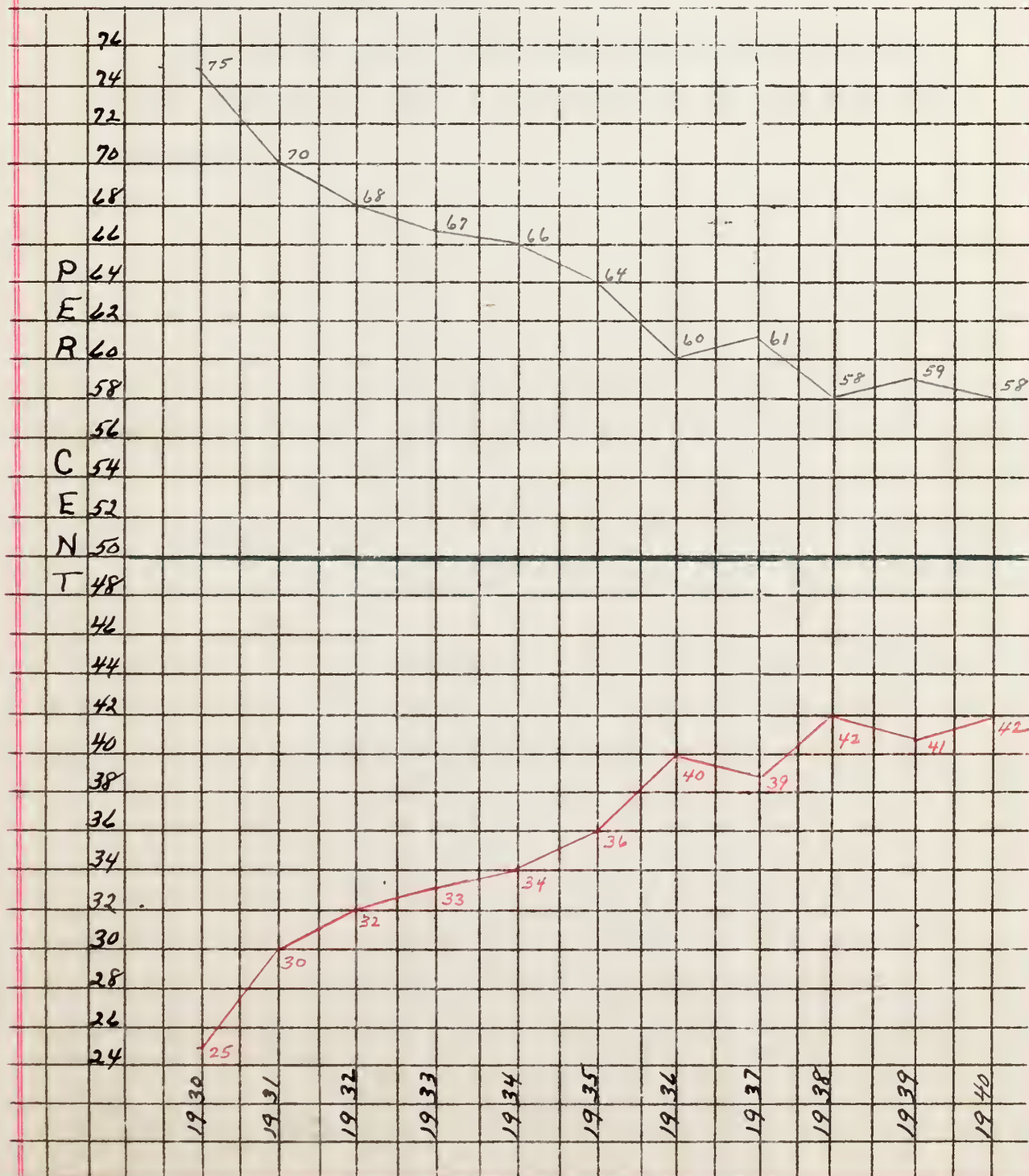




GRAPH 2

THE PER CENT OF WHITE AND BRAVA ENROLLMENT IN THE PUBLIC  
SCHOOLS OF MARION, MASSACHUSETTS 1930--1940.

(The percentages are based on the total enrollment for each year.)







Graph 2 shows the White and the Brava enrollment translated into percentages. Here it will be noted that the per cent of Bravas has almost doubled in the last ten school years (1930--1940).

In 1930 the Brava enrollment was only 25 % of the total, whereas in 1940 it had risen to 42 % of the total enrollment..

1. The first part of the document is a letter from the President of the United States to the Congress, dated January 3, 1801. It is a very important document, as it is the first time that the President has addressed the Congress since the establishment of the office. The letter is written in a very formal and dignified style, and it contains many important points. The President discusses the state of the Union, the progress of the government, and the future of the country. He also mentions the recent election of Thomas Jefferson as President, and he expresses his confidence in the new administration. The letter is a very important document, as it sets the tone for the new administration and it outlines the President's vision for the future of the country.

## GRAPH 3

THE WHITE DISTRIBUTION EACH YEAR BY GRADE IN THE PUBLIC  
SCHOOLS OF MARION, MASSACHUSETTS.

1930----1940

|       |   |      |      |      |      |      |      |      |      |      |      |      |      |
|-------|---|------|------|------|------|------|------|------|------|------|------|------|------|
|       |   |      |      |      |      |      |      |      |      |      |      |      | Aug. |
|       | 1 | 19   | 23   | 22   | 20   | 23   | 19   | 26   | 38   | 35   | 20   | 21   | 24.1 |
|       | 2 | 27   | 19   | 19   | 22   | 25   | 17   | 17   | 14   | 28   | 36   | 21   | 21.3 |
|       | 3 | 24   | 19   | 20   | 17   | 20   | 10   | 19   | 20   | 11   | 24   | 30   | 19.4 |
|       | 4 | 18   | 22   | 18   | 20   | 19   | 22   | 17   | 12   | 19   | 12   | 22   | 18.2 |
| G     |   |      |      |      |      |      |      |      |      |      |      |      |      |
| R     |   |      |      |      |      |      |      |      |      |      |      |      |      |
| A     | 5 | 21   | 15   | 24   | 19   | 18   | 18   | 20   | 18   | 15   | 18   | 12   | 18.0 |
| D     |   |      |      |      |      |      |      |      |      |      |      |      |      |
| E     |   |      |      |      |      |      |      |      |      |      |      |      |      |
| S     | 6 | 25   | 21   | 21   | 24   | 20   | 24   | 22   | 20   | 19   | 17   | 17   | 21.0 |
|       |   |      |      |      |      |      |      |      |      |      |      |      |      |
|       | 7 | 20   | 21   | 15   | 20   | 23   | 13   | 18   | 20   | 16   | 20   | 21   | 18.8 |
|       |   |      |      |      |      |      |      |      |      |      |      |      |      |
|       | 8 | 19   | 12   | 19   | 13   | 16   | 14   | 14   | 17   | 17   | 9    | 12   | 14.0 |
|       |   |      |      |      |      |      |      |      |      |      |      |      |      |
|       | 9 | 20   | 23   | 15   | 19   | 14   | 15   | 13   | 13   | 13   | 13   | 12   | 15.5 |
|       |   |      |      |      |      |      |      |      |      |      |      |      |      |
| Total |   | 193  | 175  | 173  | 176  | 168  | 152  | 146  | 172  | 173  | 169  | 168  | 175  |
|       |   | 1930 | 1931 | 1932 | 1933 | 1934 | 1935 | 1936 | 1937 | 1938 | 1939 | 1940 |      |





Graph 3 shows the number of Whites enrolled for each year as they progress through the grades. Thus, in 1930 there were 19 White pupils in grade one. In grade two for 1931 there were also 19. This latter number is of course made up from the number that was in grade one the year before, after it had been influenced by the number transferred out of the system, the number transferred into the system and the number retarded.





## GRAPH 4

THE BRAVA DISTRIBUTION EACH YEAR BY GRADE IN THE PUBLIC  
SCHOOLS OF MARION, MASSACHUSETTS.

1930----1940.

|       |      |      |      |      |      |      |      |      |      |      |      |    | Avg. |
|-------|------|------|------|------|------|------|------|------|------|------|------|----|------|
|       | 1    | 18   | 26   | 17   | 19   | 18   | 11   | 26   | 19   | 22   | 27   | 15 | 19.8 |
|       | 2    | 13   | 10   | 16   | 10   | 11   | 15   | 10   | 21   | 20   | 11   | 23 | 14.5 |
|       | 3    | 9    | 14   | 9    | 13   | 13   | 13   | 17   | 22   | 22   | 20   | 10 | 14.7 |
|       | 4    | 5    | 5    | 14   | 11   | 10   | 11   | 17   | 12   | 13   | 20   | 21 | 12.8 |
| G     |      |      |      |      |      |      |      |      |      |      |      |    |      |
| R     |      |      |      |      |      |      |      |      |      |      |      |    |      |
| A     | 5    | 8    | 4    | 6    | 13   | 13   | 8    | 10   | 8    | 9    | 12   | 17 | 9.8  |
| D     |      |      |      |      |      |      |      |      |      |      |      |    |      |
| E     |      |      |      |      |      |      |      |      |      |      |      |    |      |
| S     | 6    | 4    | 8    | 6    | 6    | 9    | 13   | 10   | 9    | 14   | 8    | 11 | 8.9  |
|       |      |      |      |      |      |      |      |      |      |      |      |    |      |
|       | 7    | 4    | 2    | 8    | 7    | 7    | 9    | 9    | 9    | 13   | 11   | 10 | 8.0  |
|       |      |      |      |      |      |      |      |      |      |      |      |    |      |
|       | 8    | 2    | 4    | 2    | 6    | 3    | 3    | 5    | 6    | 5    | 8    | 6  | 4.5  |
|       |      |      |      |      |      |      |      |      |      |      |      |    |      |
|       | 9    | 0    | 1    | 2    | 2    | 1    | 2    | 6    | 3    | 7    | 0    | 8  | 2.9  |
|       |      |      |      |      |      |      |      |      |      |      |      |    |      |
| Total | 63   | 74   | 80   | 87   | 85   | 85   | 110  | 109  | 125  | 117  | 121  | 96 |      |
|       | 1930 | 1931 | 1932 | 1933 | 1934 | 1935 | 1936 | 1937 | 1938 | 1939 | 1940 |    |      |



Graph 4 shows the number of Bravas enrolled each year as they progress through the grades. Thus, in 1930 there were 18 Brava pupils in grade one. In grade two for 1931 there were only 10. This latter number is of course made up from that number that was in grade one the year before, after it had been influenced by the number transferred out of the system, the number transferred into the system and the number retarded.





## GRAPH 3 --- GRAPH 4

Each grade is represented by a rectangle for each year and the diagonal that passes through each rectangle traces the numerical history of each grade as it progresses year by year.

There were 18 Bravas enrolled in the first grade in 1930 against 19 Whites enrolled in that grade for the same year. In the second grade in 1931 there were only 10 Bravas, a decrease of 44.4 %. At the same time there were 19 Whites in grade two as compared to 19 in grade one the year before, indicating no change in membership. As we trace this same class as it progresses from year to year, we find that of the 18 Bravas enrolled in grade one only 7 were enrolled in grade nine, a decrease of 61.1 %. Of the 19 Whites enrolled in the same grade one, 13 were enrolled in grade nine, a decrease of only 31.5 %, approximately half the decrease of the Brava. As we examine the Brava enrollment of the class entering school in 1931, we find that of the 26 Bravas in grade one, none was enrolled in grade nine, a decrease of 100 %. Of the 23 Whites enrolled in the same grade one, 13 were enrolled in grade nine, a decrease of only 47.8 %. The average membership for the Brava members of grade one for eleven years (1930--1940) was 19.8; while the average membership for grade nine for the same eleven year period was 2.9, a difference of 16.9 or 85.3 %. The average White





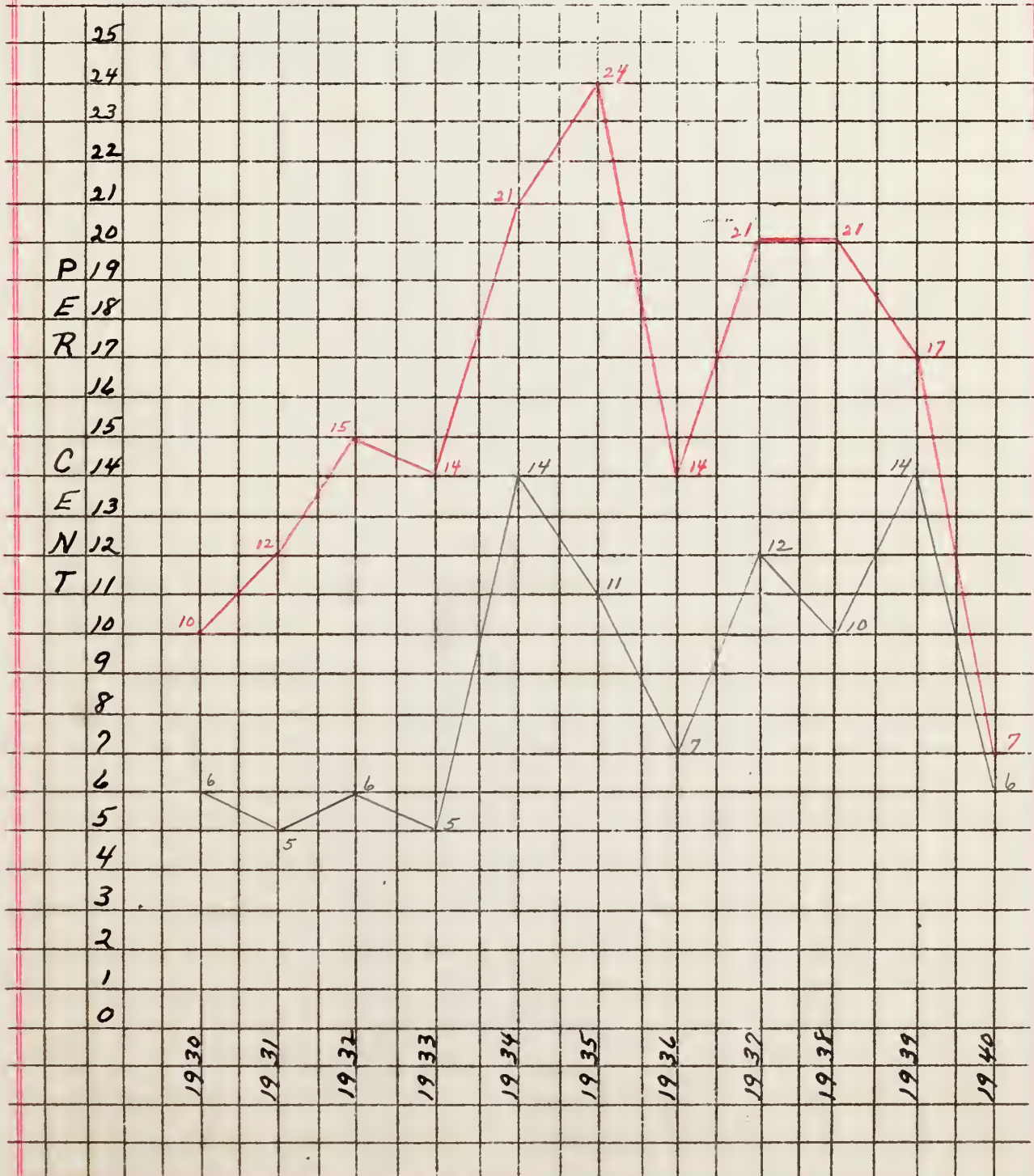
membership of grade one for the same period was 24.1 ; while the average membership for grade nine was 15.5 , a difference of 8.6 or only 35.6 %. Again the decrease in the White enrollment is approximately half the Brava decrease.

An analysis of any class, as it progresses year by year will show a decrease in enrollment. The average White decrease in enrollment between grades one and nine for the eleven years (1930--1940) has been 8.6 or 35.6 %; as compared to the average Brava decrease of 16.9 or 85.3 %, a difference of 49.7 %. This indicates that approximately 50 % more Whites than Bravas attain the ninth grade.



GRAPH 5

THE PER CENT OF WHITE AND BRAVA PUPILS REPEATING ALL GRADES  
IN THE PUBLIC SCHOOLS OF MARION, MASSACHUSETTS 1930--1940.







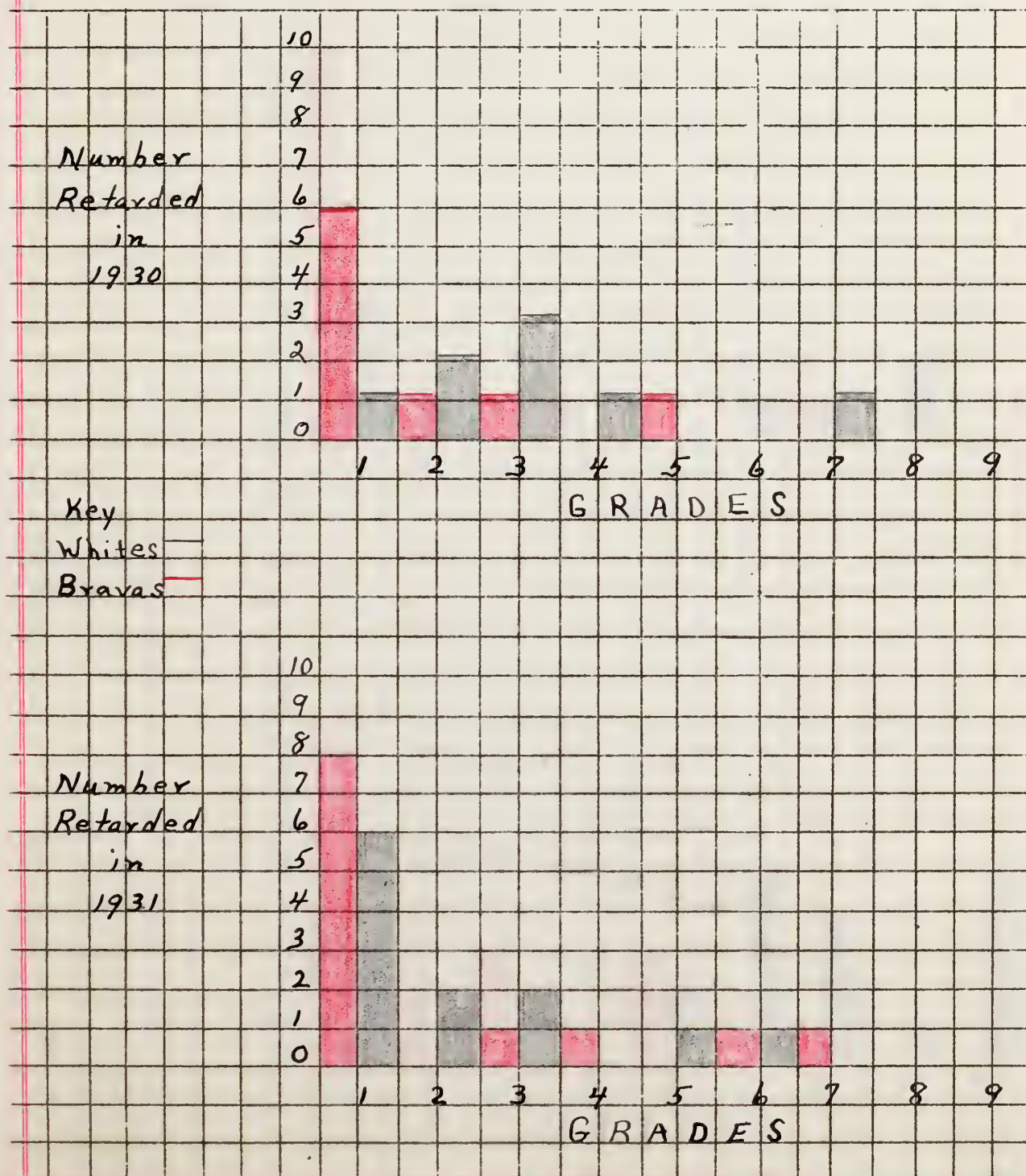
Graph 5 reveals that there are almost twice as many failures among the Bravas as among the Whites. The average per cent of failures for the Brava for a period of eleven years (1930--1940) was 16 % as compared to an average of 8.7 % for the Whites.

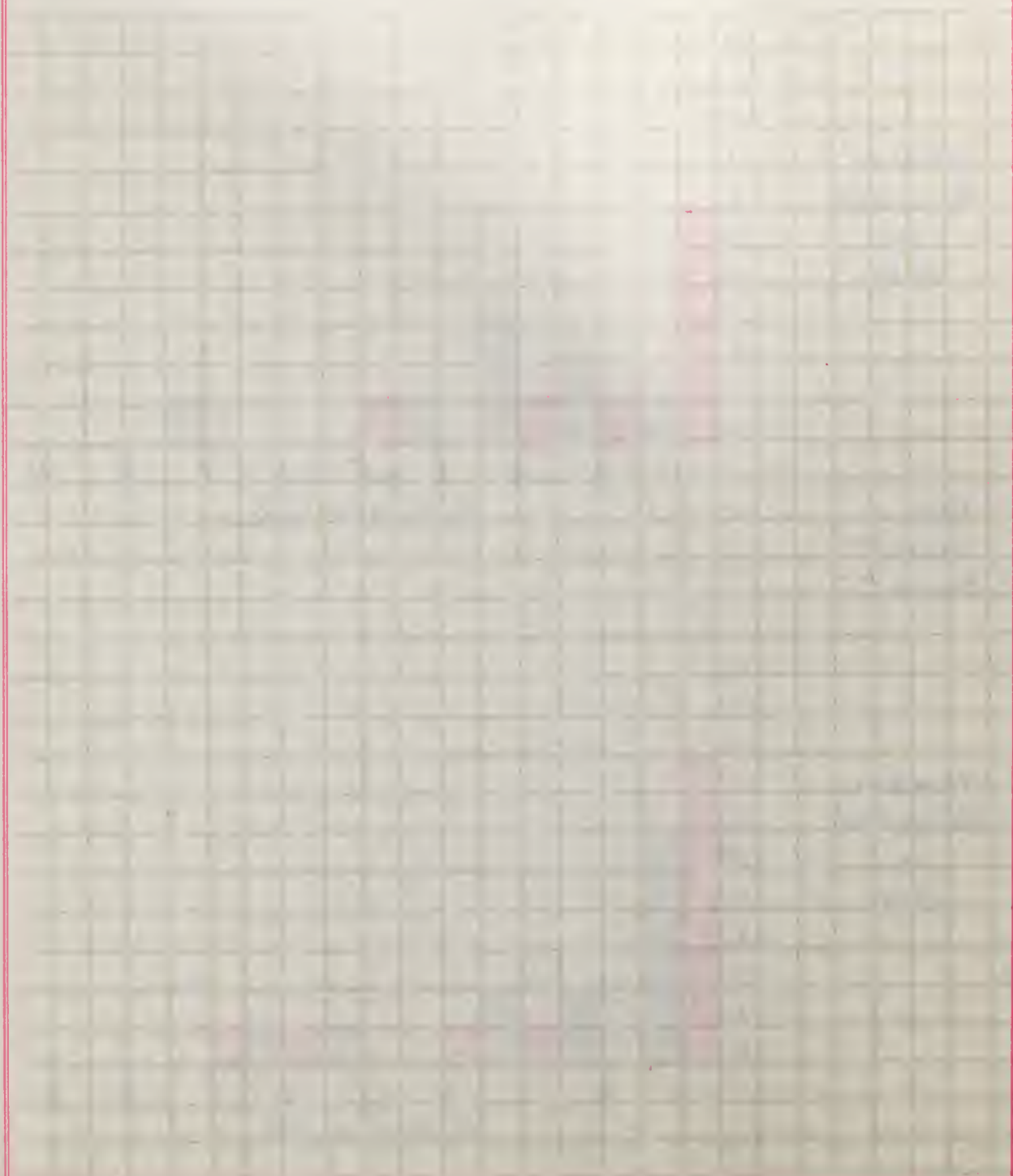


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## GRAPH 6----GRAPH 7

THE DISTRIBUTION OF RETARDATION (FAILURE TO BE PROMOTED) BY  
YEAR AND GRADE IN THE PUBLIC SCHOOLS OF MARION, MASSACHUSETTS.  
1930---1940.



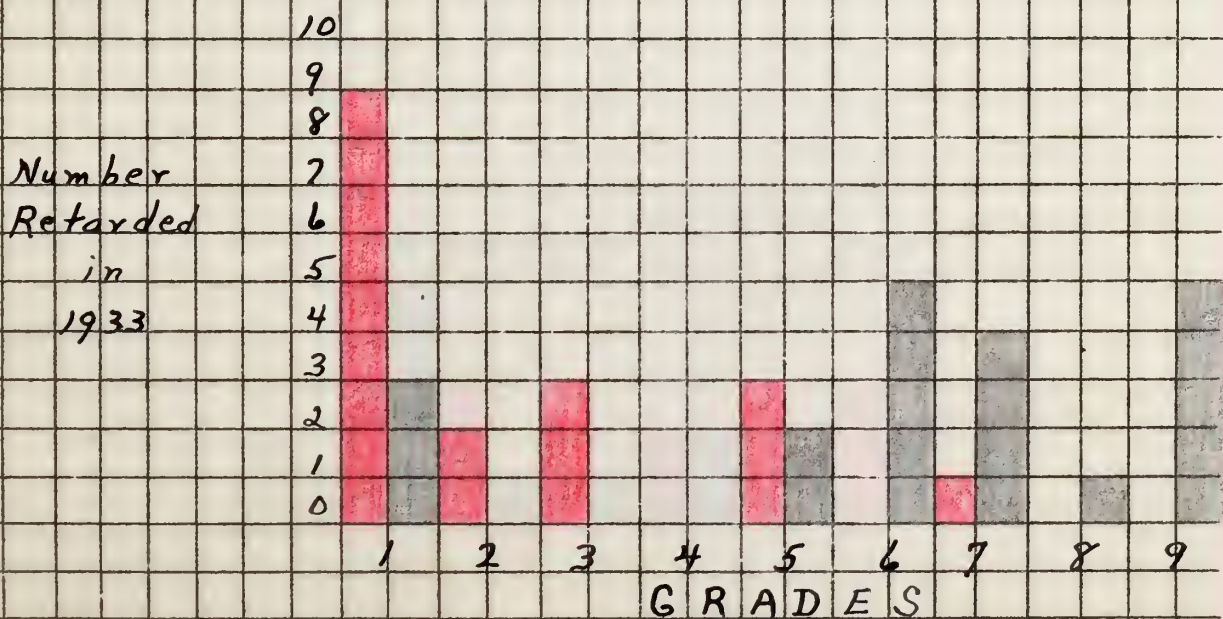
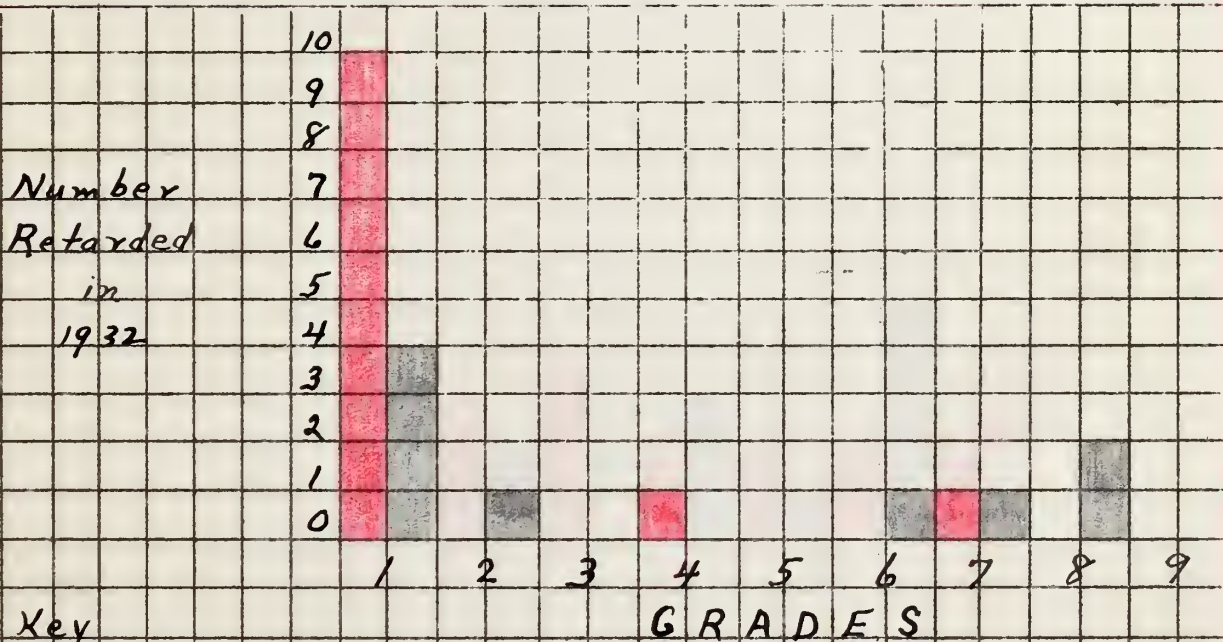




## GRAPH 8-----GRAPH 9

THE DISTRIBUTION OF RETARDATION (FAILURE TO BE PROMOTED) BY  
YEAR AND GRADE IN THE PUBLIC SCHOOLS OF MARION, MASSACHUSETTS.

1930-----1940.



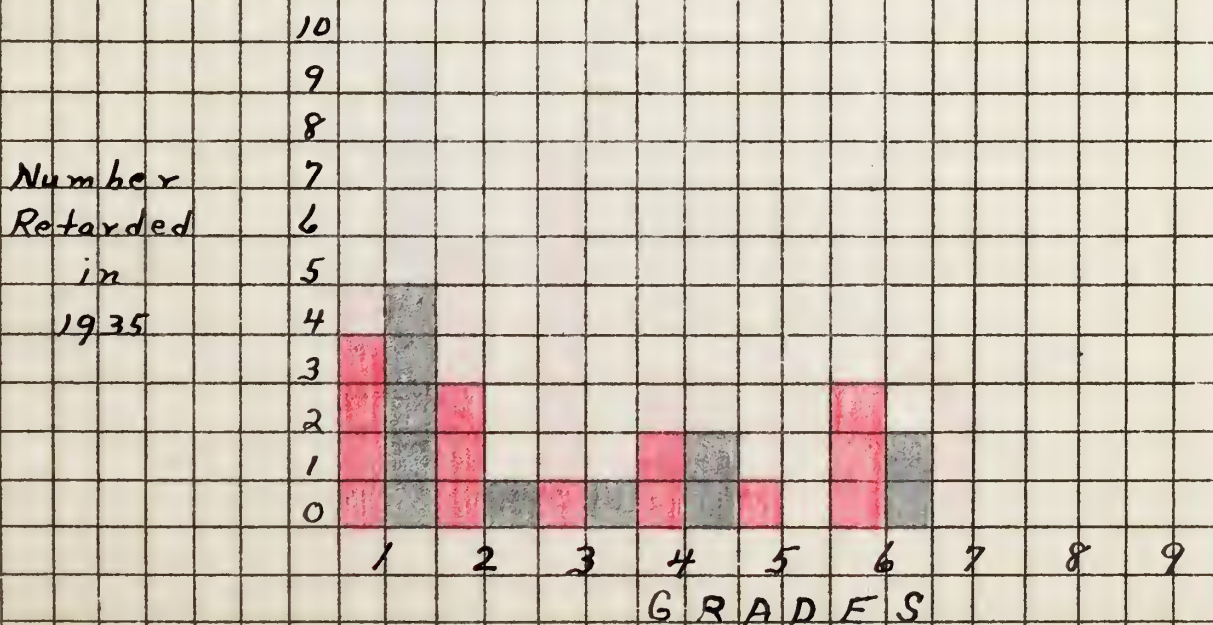
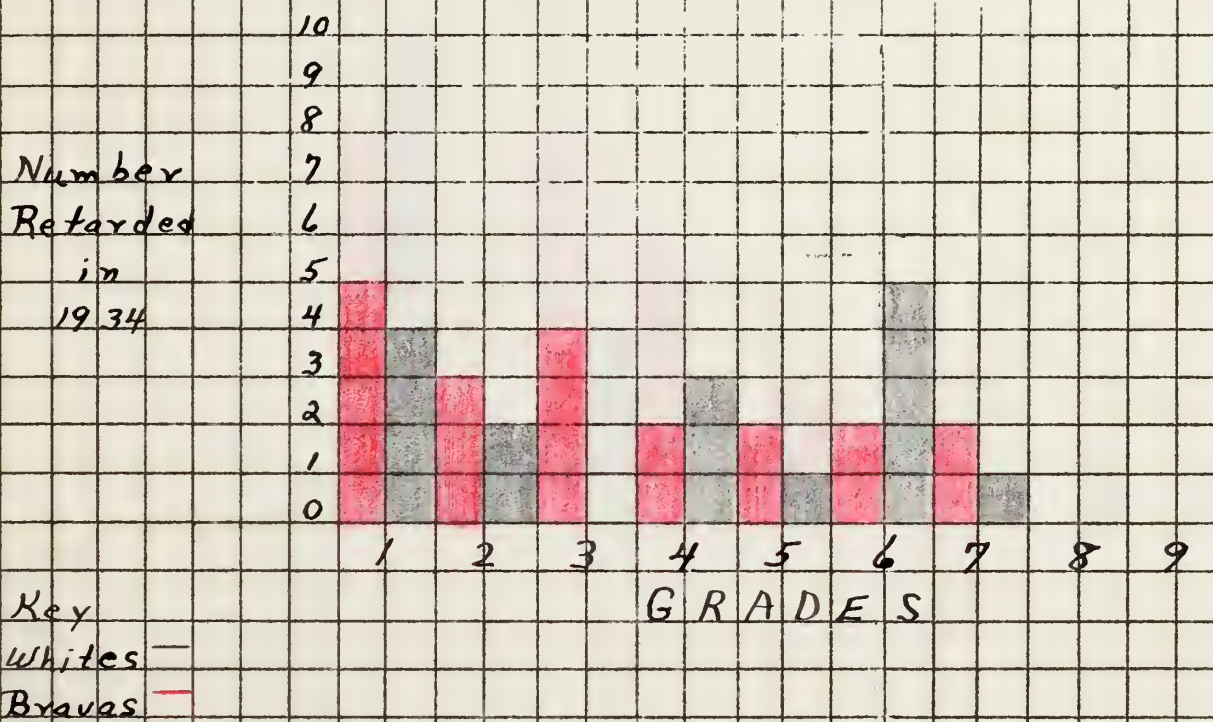




## GRAPH 10 ---- GRAPH 11

THE DISTRIBUTION OF RETARDATION (FAILURE TO BE PROMOTED) BY  
YEAR AND GRADE IN THE PUBLIC SCHOOLS OF MARION, MASSACHUSETTS.

1930 ---- 1940.



# Mathematics

Chapter 1: Introduction to Mathematics

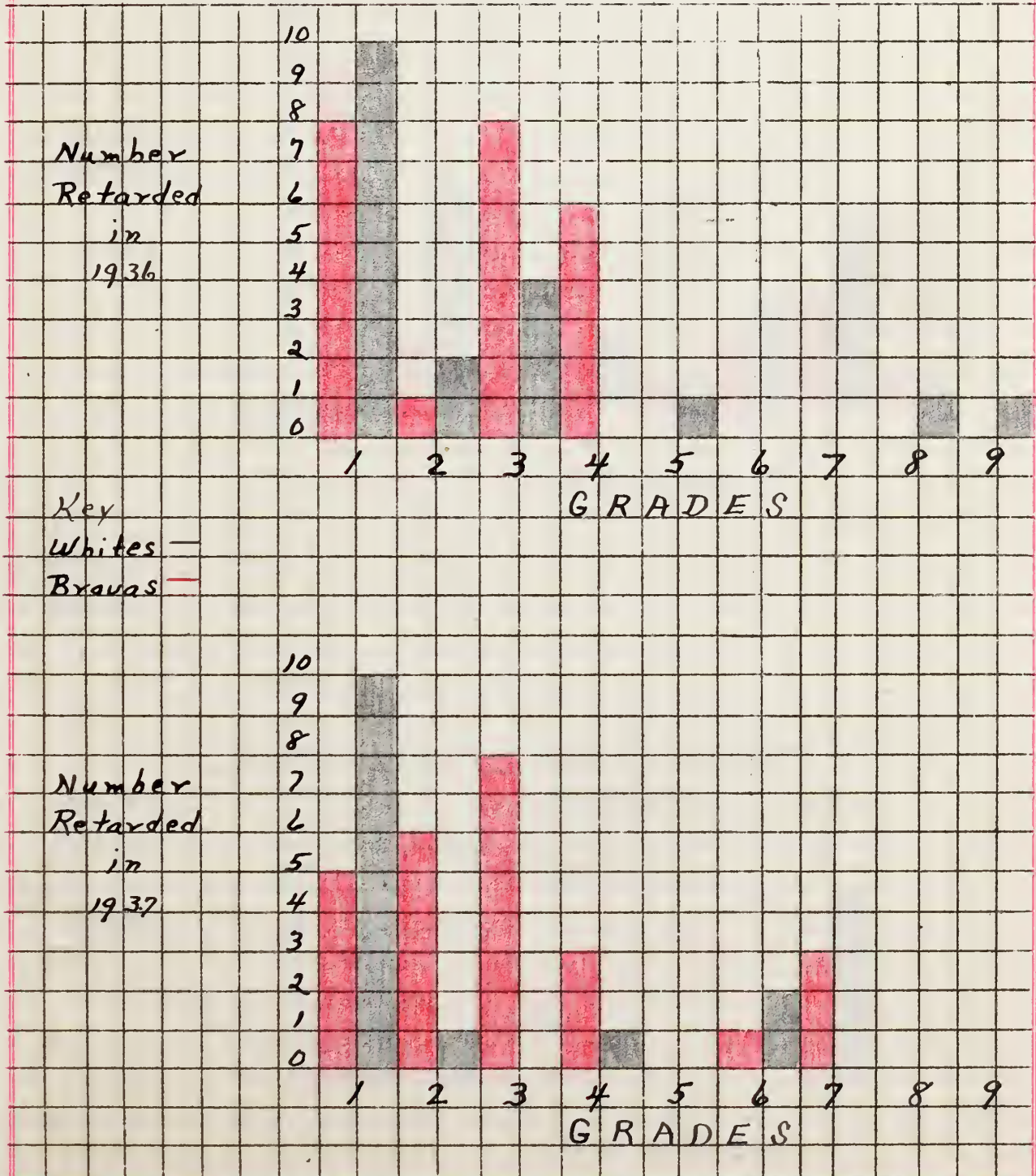




## GRAPH 12----GRAPH 13

THE DISTRIBUTION OF RETARDATION (FAILURE TO BE PROMOTED) BY  
YEAR AND GRADE IN THE PUBLIC SCHOOLS OF MARION, MASSACHUSETTS.

1930----1940.



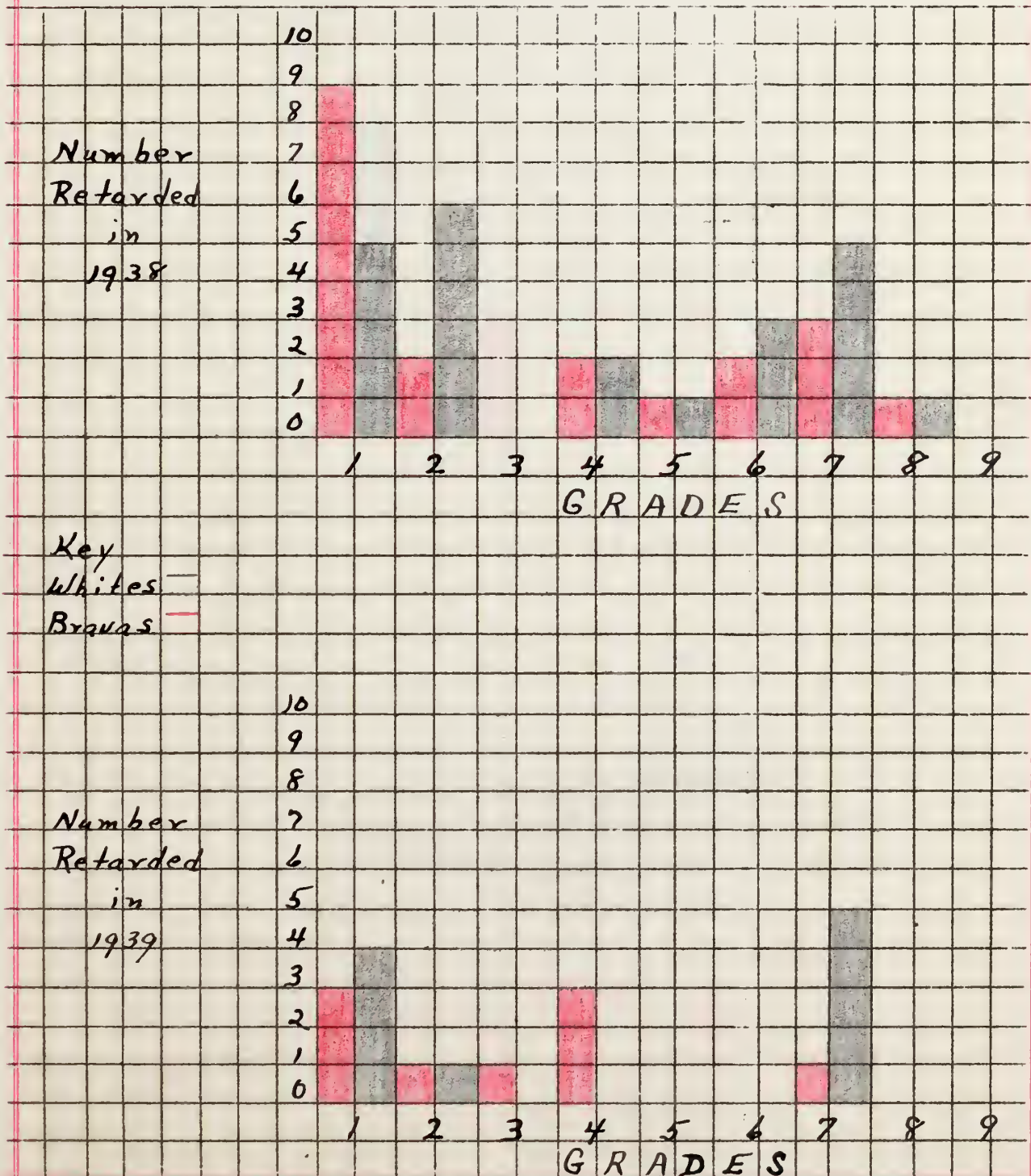




## GRAPH 14----GRAPH 15

THE DISTRIBUTION OF RETARDATION (FAILURE TO BE PROMOTED) BY  
YEAR AND GRADE IN THE PUBLIC SCHOOLS OF MARION, MASSACHUSETTS.

1930----1940.



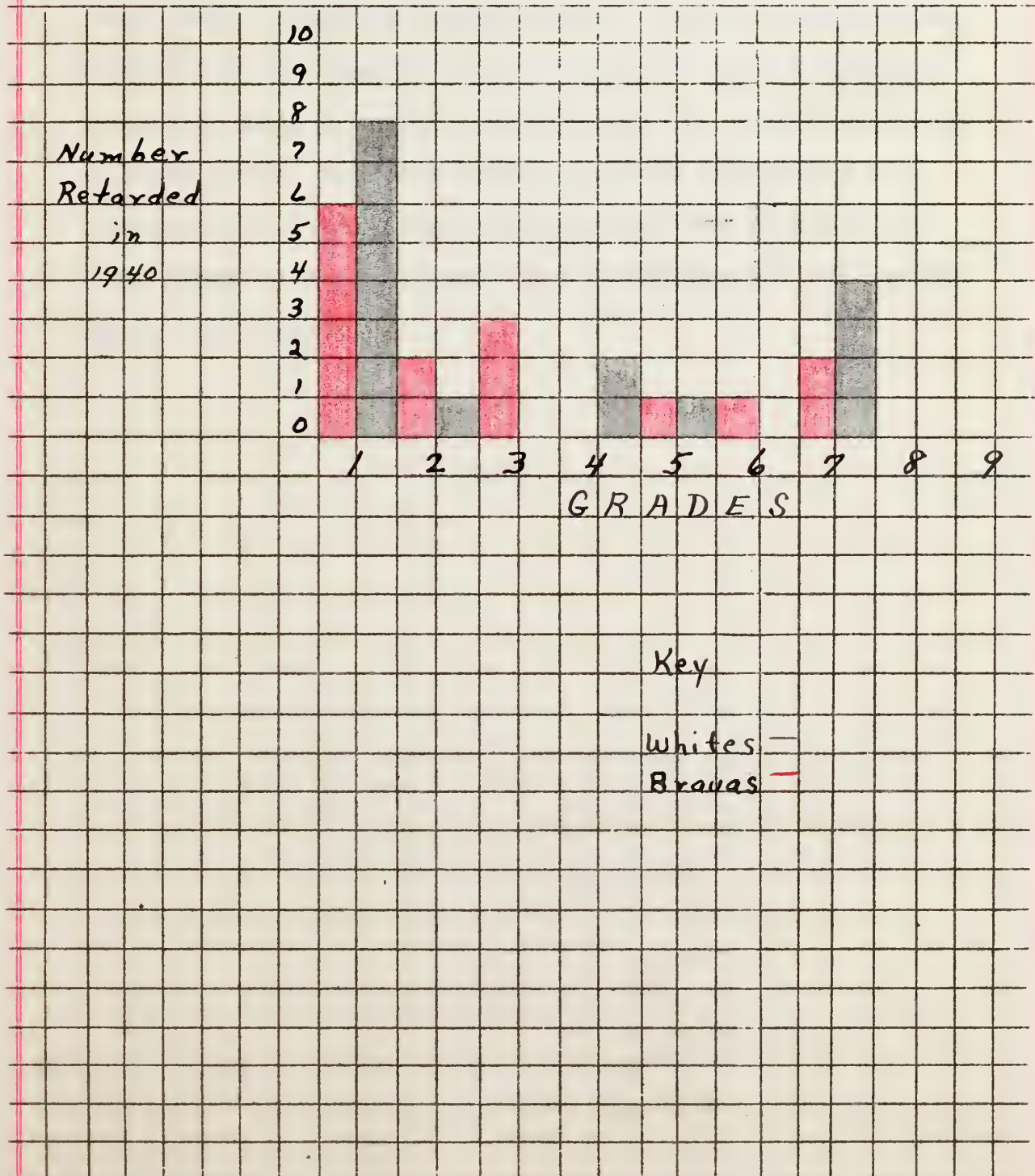




## GRAPH 16

THE DISTRIBUTION OF RETARDATION (FAILURE TO BE PROMOTED) BY  
YEAR AND GRADE IN THE PUBLIC SCHOOLS OF MARION, MASSACHUSETTS.

1930----1940.





## GRAPH 6 --- GRAPH 16

An examination of Graphs 6 through 16 shows the distribution of the White and the Brava pupils by grade each year. In making comparisons it should be remembered that these are numerical recordings and that references should be made to Graphs 3 and 4 for the number enrolled in each grade. The data shown in these graphs are not particularly significant because there is no stability from grade to grade between the percentages of White and Brava enrollment.



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TABLE I  
THE AVERAGE MEMBERSHIP AND RETENTION OF THE WHITE CHILDREN IN  
EACH GRADE IN THE PUBLIC SCHOOLS OF MARION (1930--1940)

| GRADES | AVERAGE MEMBERSHIP | AVERAGE NUMBER |
|--------|--------------------|----------------|
|        |                    | RETAINED       |
| 1      | 24.1               | 6.0            |
| 2      | 21.3               | 1.9            |
| 3      | 19.4               | 1.0            |
| 4      | 18.2               | 1.1            |
| 5      | 18.0               | .8             |
| 6      | 21.0               | 1.9            |
| 7      | 18.8               | 2.1            |
| 8      | 14.0               | .5             |
| 9      | 15.5               | .6             |

There is a gradual decrease in the average White retention from the first to the sixth grade (6.0--.8). The greatest White retention occurs in the sixth and seventh grades. The average White membership decrease is 8.6, only  $\frac{1}{2}$  as great as the Brava.

# Table 1

Summary of the results of the analysis of the data collected from the survey of the attitudes of the respondents towards the use of the Internet for the purpose of the study.

| Attitudes towards the use of the Internet | Frequency | Percentage |
|---|-----------|------------|
| Very positive                             | 10        | 20.0       |
| Positive                                  | 20        | 40.0       |
| Neutral                                   | 30        | 60.0       |
| Negative                                  | 10        | 20.0       |
| Very negative                             | 5         | 10.0       |
| Total                                     | 75        | 100.0      |

The results of the analysis of the data collected from the survey of the attitudes of the respondents towards the use of the Internet for the purpose of the study are presented in Table 1. The table shows that the majority of the respondents (60.0%) have a neutral attitude towards the use of the Internet for the purpose of the study. This is followed by 40.0% of the respondents who have a positive attitude, 20.0% who have a very positive attitude, 20.0% who have a negative attitude, and 10.0% who have a very negative attitude.

TABLE II  
THE AVERAGE MEMBERSHIP AND RETENTION OF THE BRAVA CHILDREN IN  
EACH GRADE IN THE PUBLIC SCHOOLS OF MARION (1930--1940)

| GRADES | AVERAGE MEMBERSHIP | AVERAGE NUMBER |
|--------|--------------------|----------------|
|        |                    | RETAINED       |
| 1      | 19.8               | 7.3            |
| 2      | 14.5               | 2.1            |
| 3      | 14.7               | 3.0            |
| 4      | 12.8               | 2.0            |
| 5      | 9.8                | .9             |
| 6      | 8.9                | 1.1            |
| 7      | 8.0                | 1.4            |
| 8      | 4.5                | .1             |
| 9      | 2.9                | .0             |

Table II clearly indicates that the greatest Brava retention takes place in grades 1, 2, 3 and 4, while there is little or no Brava retention in grades 8 and 9. Generally speaking, there are more Bravas retained in each of the first five grades than there are Whites. The decrease in the number of Bravas retained from grade one to grade nine is due to the fact that there is a far greater number of Bravas in grade one; the average membership decreases from 19.8 to 2.9. The fact that only one Brava

# Table 1

Table 1 shows the results of the regression analysis. The dependent variable is the log of the number of employees. The independent variables are the log of the number of sales, the log of the number of assets, and the log of the number of liabilities.

| Variable        | Coefficient | Standard Error |
|-----------------|-------------|----------------|
| Log Sales       | 0.75        | 0.05           |
| Log Assets      | 0.15        | 0.03           |
| Log Liabilities | 0.10        | 0.02           |
| Constant        | 1.20        | 0.10           |
| Log Sales       | 0.75        | 0.05           |
| Log Assets      | 0.15        | 0.03           |
| Log Liabilities | 0.10        | 0.02           |
| Constant        | 1.20        | 0.10           |
| Log Sales       | 0.75        | 0.05           |
| Log Assets      | 0.15        | 0.03           |
| Log Liabilities | 0.10        | 0.02           |
| Constant        | 1.20        | 0.10           |

The results of the regression analysis are shown in Table 1. The dependent variable is the log of the number of employees. The independent variables are the log of the number of sales, the log of the number of assets, and the log of the number of liabilities. The coefficient on the log of sales is 0.75, which is significant at the 1% level. The coefficient on the log of assets is 0.15, which is significant at the 5% level. The coefficient on the log of liabilities is 0.10, which is significant at the 10% level. The constant term is 1.20, which is significant at the 1% level.



was retained in grade eight and that none was retained in grade nine must be considered in relation to an average membership of 4.5 and 2.9 respectively. The average Brava membership decrease is 16.9, almost twice as great as the White,

1. The first part of the paper is devoted to the study of the properties of the function  $f(x)$  defined by the equation  $f(x) = \int_0^x f(t) dt$ . It is shown that  $f(x)$  is a constant function, and its value is determined by the initial condition  $f(0)$ .

2. In the second part, we consider the problem of finding the maximum value of the function  $f(x)$  on the interval  $[0, 1]$ . It is shown that the maximum value is attained at  $x = 0$  and is equal to  $f(0)$ .

3. Finally, we discuss the question of the uniqueness of the solution of the equation  $f(x) = \int_0^x f(t) dt$ . It is shown that the solution is unique for any given initial condition  $f(0)$ .

## CHAPTER III

### INTELLIGENCE QUOTIENTS

The intelligence quotients from which the medians of the various grades have been established were obtained from an analysis of the official school records. The records referred to are the results of several years of testing. Each year the school department has made it a policy to have representatives from the Massachusetts State Department of Mental Health test those pupils enrolled who have not been previously tested plus those who in the opinion of the school authorities should be re-tested.

The Stanford Revision of the Binet Simon Tests is used and the intelligence quotients are computed by the state psychiatrist by individual testing.

# THE STATE

## CHAPTER 1. THE STATE

The state is a political entity which is organized for the purpose of governing a territory and its inhabitants. It is a legal entity which is recognized by other states and which has the power to enforce its laws within its territory. The state is a sovereign entity which is not subject to the authority of any other state. It is a permanent entity which exists independently of the will of any individual or group of individuals. The state is a collective entity which is composed of many individuals who are united by a common purpose and a common interest. The state is a legal entity which is recognized by other states and which has the power to enforce its laws within its territory. The state is a sovereign entity which is not subject to the authority of any other state. It is a permanent entity which exists independently of the will of any individual or group of individuals. The state is a collective entity which is composed of many individuals who are united by a common purpose and a common interest.



TABLE III

THE FREQUENCY DISTRIBUTION OF I Q's AMONG THE WHITE AND  
BRAVA CHILDREN OF THE FIRST GRADES IN THE PUBLIC SCHOOLS  
OF MARION, MASSACHUSETTS 1930--1940.

| WHITE I Q's.       |        |    |     |     | BRAVA I Q's.       |       |    |     |     |
|--------------------|--------|----|-----|-----|--------------------|-------|----|-----|-----|
| Scores             | f.     | d. | fd. | fd. | Scores             | f.    | d. | fd. | fd. |
| 120--129           | 1      | 2  | 2   | 4   | 120--129           |       |    |     |     |
| 110--119           | 4      | 1  | 4   | 4   | 110--119           |       |    |     |     |
| 100--109           | 3      | 0  | 0   | 0   | 100--109           | 2     | 2  | 4   | 8   |
| 90--99             | 4      | -1 | -4  | 4   | 90--99             | 1     | 1  | 1   | 1   |
| 80--89             | 4      | 2  | 8   | 16  | 80--89             | 6     | 0  | 0   | 0   |
| 70--79             |        |    |     |     | 70--79             | 4     | -1 | -4  | 4   |
| 60--69             |        |    |     |     | 60--69             | 2     | 2  | 4   | 8   |
| 50--59             |        |    |     |     | 50--59             |       |    |     |     |
|                    | 16     |    | -6  | 28  |                    | 15    |    | -3  | 21  |
| Mean Score         | 101.25 |    |     |     | Mean Score         | 83.13 |    |     |     |
| Median Score       | 95.00  |    |     |     | Median Score       | 88.30 |    |     |     |
| Standard Deviation | 12.60  |    |     |     | Standard Deviation | 11.50 |    |     |     |

An examination of Table III results in the following conclusions concerning grades 1:

Fifty per cent (50) of the White cases lie above the median 95.0 and that 50 % of the Brava cases lie above the median 88.3, a difference of 6.7 scores.

The White I Q's are 6.7 scores greater than the Bravas, furthermore, 92.1 % of the Whites equal or exceed the average I Q of the Brava, while not a single member of the Brava group attains the White mean of 101.25.



TABLE IV

THE FREQUENCY DISTRIBUTION OF I Q's AMONG THE WHITE AND BRAVA CHILDREN OF THE SECOND GRADES IN THE PUBLIC SCHOOLS OF MARION, MASSACHUSETTS 1930--1940.

| WHITE I Q's        |        |    |     |     | BRAVA I Q's        |       |    |     |     |
|--------------------|--------|----|-----|-----|--------------------|-------|----|-----|-----|
| Scores             | f.     | d. | fd. | fd. | Scores             | f.    | d. | fd. | fd. |
| 120--129           | 2      | 2  | 4   | 8   | 120--129           |       |    |     |     |
| 110--119           | 7      | 1  | 7   | 7   | 110--119           |       |    |     |     |
| 100--109           | 2      | 0  | 0   | 0   | 100--109           |       |    |     |     |
| 90--99             | 2      | -1 | -2  | 2   | 90--99             | 4     | 2  | 8   | 16  |
| 80--89             | 3      | 2  | 6   | 12  | 80--89             | 9     | 1  | 9   | 9   |
| 70--79             | 3      | 3  | 9   | 27  | 70--79             | 7     | 0  | 0   | 0   |
| 60--69             |        |    |     |     | 60--69             | 2     | -1 | -2  | 2   |
| 50--59             |        |    |     |     | 50--59             | 1     | 2  | 2   | 4   |
|                    | 19     |    | -6  | 56  |                    | 23    |    | 13  | 31  |
| Mean Score         | 101.85 |    |     |     | Mean Score         | 80.60 |    |     |     |
| Median Score       | 105.00 |    |     |     | Median Score       | 82.20 |    |     |     |
| Standard Deviation | 16.80  |    |     |     | Standard Deviation | 10.10 |    |     |     |

An examination of Table IV results in the following conclusions concerning grades 2:

Fifty per cent (50) of the White cases lie above the median 105.0 and that 50 % of the Brava cases lie above the median 82.2, a difference of 22.8 scores.

The White I Q's are 22.8 scores greater than the Bravas; furthermore, 83.2 % of the Whites equal or exceed the average I Q of the Brava, while not a single member of the Brava group attains the White mean of 101.85.

The first part of the paper discusses the importance of the  
 research and the objectives of the study. The second part  
 describes the methodology used in the study.

| Table 1: Summary of the data |    |     |     | Table 2: Summary of the results |     |     |     |
|------------------------------|----|-----|-----|---------------------------------|-----|-----|-----|
| 1                            | 2  | 3   | 4   | 5                               | 6   | 7   | 8   |
| 10                           | 20 | 30  | 40  | 50                              | 60  | 70  | 80  |
| 90                           | 80 | 70  | 60  | 50                              | 40  | 30  | 20  |
| 80                           | 70 | 60  | 50  | 40                              | 30  | 20  | 10  |
| 70                           | 60 | 50  | 40  | 30                              | 20  | 10  | 0   |
| 60                           | 50 | 40  | 30  | 20                              | 10  | 0   | -10 |
| 50                           | 40 | 30  | 20  | 10                              | 0   | -10 | -20 |
| 40                           | 30 | 20  | 10  | 0                               | -10 | -20 | -30 |
| 30                           | 20 | 10  | 0   | -10                             | -20 | -30 | -40 |
| 20                           | 10 | 0   | -10 | -20                             | -30 | -40 | -50 |
| 10                           | 0  | -10 | -20 | -30                             | -40 | -50 | -60 |

The results of the study are presented in the following table. The data shows that the research objectives have been achieved and the methodology used is effective.

The data also shows that the research has been successful in achieving its goals and objectives. The results of the study are presented in the following table.

The results of the study are presented in the following table. The data shows that the research objectives have been achieved and the methodology used is effective.



TABLE V

THE FREQUENCY DISTRIBUTION OF I Q's AMONG THE WHITE AND  
BRAVA CHILDREN OF THE THIRD GRADES IN THE PUBLIC SCHOOLS  
OF MARION, MASSACHUSETTS 1930--1940.

| WHITE I Q's.       |       |    |     |     | BRAVA I Q's.       |       |    |     |     |
|--------------------|-------|----|-----|-----|--------------------|-------|----|-----|-----|
| Scores             | f.    | d. | fd. | fd. | Scores             | f.    | d. | fd. | fd. |
| 120--129           | 1     | 4  | 4   | 16  | 120--129           |       |    |     |     |
| 110--119           | 0     | 3  | 3   | 9   | 110--119           |       |    |     |     |
| 100--109           | 7     | 2  | 14  | 28  | 100--109           |       |    |     |     |
| 90--99             | 4     | 1  | 4   | 4   | 90--99             | 1     | 2  | 2   | 4   |
| 80--89             | 15    | 0  | 0   | 0   | 80--89             | 4     | 1  | 4   | 4   |
| 70--79             | 1     | -1 | -1  | 1   | 70--79             | 3     | 0  | 0   | 0   |
| 60--69             | 2     | 2  | 4   | 8   | 60--69             | 2     | -1 | -2  | 2   |
| 50--59             |       |    |     |     | 50--59             |       |    |     |     |
|                    | 30    |    | 20  | 66  |                    | 10    |    | 4   | 10  |
| Mean Score         | 91.45 |    |     |     | Mean Score         | 79.00 |    |     |     |
| Median Score       | 88.12 |    |     |     | Median Score       | 75.00 |    |     |     |
| Standard Deviation | 14.20 |    |     |     | Standard Deviation | 9.10  |    |     |     |

An examination of Table V results in the following conclusions concerning grades 3:

Fifty per cent (50) of the White cases lie above the median 88.1 and that 50 % of the Brava cases lie above the median 75.0, a difference of 13.1 scores.

The White I Q's are 13.1 scores greater than the Bravas; furthermore, 90.6 % of the Whites equal or exceed the average I Q of the Brava, while only 10 % of the Brava group attain the White mean of 91.45.

THE UNIVERSITY OF CHICAGO

DEPARTMENT OF CHEMISTRY

LABORATORY OF ORGANIC CHEMISTRY

| DATE     | NAME         | INITIALS | SCORE |
|----------|--------------|----------|-------|
| 10/1/50  | JOHN D. COLE | JDC      | 100   |
| 10/2/50  | JOHN D. COLE | JDC      | 100   |
| 10/3/50  | JOHN D. COLE | JDC      | 100   |
| 10/4/50  | JOHN D. COLE | JDC      | 100   |
| 10/5/50  | JOHN D. COLE | JDC      | 100   |
| 10/6/50  | JOHN D. COLE | JDC      | 100   |
| 10/7/50  | JOHN D. COLE | JDC      | 100   |
| 10/8/50  | JOHN D. COLE | JDC      | 100   |
| 10/9/50  | JOHN D. COLE | JDC      | 100   |
| 10/10/50 | JOHN D. COLE | JDC      | 100   |

JOHN D. COLE

10/11/50

10/12/50

10/13/50

10/14/50

10/15/50

10/16/50

TABLE VI

THE FREQUENCY DISTRIBUTION OF I Q's AMONG THE WHITE AND  
BRAVA CHILDREN OF THE FOURTH GRADE IN THE PUBLIC SCHOOLS  
OF MARION, MASSACHUSETTS 1930--1940.

| WHITE I Q's.       |       |    |     |     | BRAVA I Q's.       |       |    |     |     |
|--------------------|-------|----|-----|-----|--------------------|-------|----|-----|-----|
| Scores             | f.    | d. | fd. | fd. | Scores             | f.    | d. | fd. | fd. |
| 120--129           |       |    |     |     | 120--129           |       |    |     |     |
| 110--119           | 5     | 2  | 10  | 20  | 110--119           |       |    |     |     |
| 100--109           | 6     | 1  | 6   | 6   | 100--109           |       |    |     |     |
| 90--99             | 4     | 0  | 0   | 0   | 90--99             | 1     | 2  | 2   | 4   |
| 80--89             | 2     | -1 | -2  | 2   | 80--89             | 6     | 1  | 6   | 6   |
| 70--79             | 5     | 2  | 10  | 20  | 70--79             | 6     | 0  | 0   | 0   |
| 60--69             |       |    |     |     | 60--69             | 5     | -1 | -5  | 5   |
| 50--59             |       |    |     |     | 50--59             | 2     | 2  | 4   | 8   |
|                    | 22    |    | 4   | 48  |                    | 20    |    | -1  | 23  |
| Mean Score         | 96.81 |    |     |     | Mean Score         | 74.50 |    |     |     |
| Median Score       | 95.00 |    |     |     | Median Score       | 75.00 |    |     |     |
| Standard Deviation | 14.60 |    |     |     | Standard Deviation | 15.00 |    |     |     |

An examination of Table VI results in the following conclusions concerning grades 4:

Fifty per cent (50) of the White cases lie above the median 95.0 and that 50 % of the Brava cases lie above the median 75.0 , a difference of 20.0 scores.

The White I Q's are 20.0 scores greater than the Bravas, furthermore, 89.4 % of the Whites equal or exceed the average I Q of the Brava, while only 5 % of the Brava group attain the White mean of 96.81.





TABLE VII

THE FREQUENCY DISTRIBUTION OF I Q's AMONG THE WHITE AND  
BRAVA CHILDREN OF THE FIFTH GRADES IN THE PUBLIC SCHOOLS  
OF MARION, MASSACHUSETTS 1930--1940.

| WHITE I Q's.       |       |    |     |     | BRAVA I Q's.       |       |    |     |     |
|--------------------|-------|----|-----|-----|--------------------|-------|----|-----|-----|
| Scores             | f.    | d. | fd. | fd. | Scores             | f.    | d. | fd. | fd. |
| 120--129           |       |    |     |     | 120--129           |       |    |     |     |
| 110--119           | 2     | 3  | 6   | 18  | 110--119           |       |    |     |     |
| 100--109           | 0     | 2  | 0   | 0   | 100--109           | 1     | 3  | 3   | 9   |
| 90--99             | 3     | 1  | 3   | 9   | 90--99             | 2     | 2  | 4   | 8   |
| 80--89             | 4     | 0  | 0   | 0   | 80--89             | 2     | 1  | 2   | 2   |
| 70--79             | 1     | -1 | -1  | 1   | 70--79             | 6     | 0  | 0   | 0   |
| 60--69             | 2     | 2  | 4   | 8   | 60--69             | 4     | -1 | -4  | 4   |
| 50--59             |       |    |     |     | 50--59             | 2     | 2  | 4   | 8   |
|                    | 12    |    | 4   | 30  |                    | 17    |    | 1   | 31  |
| Mean Score         | 85.33 |    |     |     | Mean Score         | 78.30 |    |     |     |
| Median Score       | 87.50 |    |     |     | Median Score       | 75.50 |    |     |     |
| Standard Deviation | 14.70 |    |     |     | Standard Deviation | 13.40 |    |     |     |

An examination of Table VII results in the following conclusions concerning grades 5:

Fifty per cent (50) of the White cases lie above the median 87.5 and that 50 % of the Brava cases lie above the median 75.5, a difference of 12 scores.

The White I Q's are 12.0 scores greater than the Bravas, furthermore, 82.5 % of the Whites equal or exceed the average I Q of the Brava, while only 29.4 % of the Brava group attain the White mean of 85.33.



TABLE VIII

THE FREQUENCY DISTRIBUTION OF I Q's AMONG THE WHITE AND  
BRAVA CHILDREN OF THE SIXTH GRADES IN THE PUBLIC SCHOOLS  
OF MARION, MASSACHUSETTS 1930--1940.

| WHITE I Q's.       |        |    |     |     | BRAVA I Q's.       |       |    |     |     |
|--------------------|--------|----|-----|-----|--------------------|-------|----|-----|-----|
| Scores             | f.     | d. | fd. | fd. | Scores             | f.    | d. | fd. | fd. |
| 120--129           | 2      | 2  | 4   | 8   | 120--129           |       |    |     |     |
| 110--119           | 3      | 1  | 3   | 3   | 110--119           |       |    |     |     |
| 100--109           | 4      | 0  | 0   | 0   | 100--109           |       |    |     |     |
| 90--99             | 2      | -1 | -2  | 2   | 90--99             |       |    |     |     |
| 80--89             | 4      | 2  | 8   | 16  | 80--89             | 4     | 1  | 4   | 4   |
| 70--79             | 2      | 3  | 6   | 18  | 70--79             | 1     | 0  | 0   | 0   |
| 60--69             |        |    |     |     | 60--69             | 3     | -1 | -3  | 3   |
| 50--59             |        |    |     |     | 50--59             | 2     | 2  | 4   | 8   |
|                    | 17     |    | -9  | 47  |                    | 11    |    | -3  | 15  |
| Mean Score         | 99.71  |    |     |     | Mean Score         | 72.30 |    |     |     |
| Median Score       | 102.50 |    |     |     | Median Score       | 75.00 |    |     |     |
| Standard Deviation | 15.70  |    |     |     | Standard Deviation | 11.30 |    |     |     |

An examination of Table VIII results in the following conclusions concerning grades 6:

Fifty per cent (50) of the White cases lie above the median 102.5 and that 50 % of the Brava cases lie above the median 75.0, a difference of 27.5 scores.

The White I Q's are 27.5 scores greater than the Bravas, furthermore, 97.2 % of the Whites equal or exceed the average I Q of the Brava, while not a single member of the Brava group attains the White mean of 99.7.

The following table shows the results of the experiment. The first column shows the time taken for the reaction to occur. The second column shows the volume of gas produced. The third column shows the temperature of the reaction mixture. The fourth column shows the concentration of the reactants. The fifth column shows the pressure of the reaction mixture. The sixth column shows the volume of the reaction mixture. The seventh column shows the mass of the reaction mixture. The eighth column shows the density of the reaction mixture. The ninth column shows the viscosity of the reaction mixture. The tenth column shows the refractive index of the reaction mixture. The eleventh column shows the optical density of the reaction mixture. The twelfth column shows the absorbance of the reaction mixture. The thirteenth column shows the transmittance of the reaction mixture. The fourteenth column shows the reflectance of the reaction mixture. The fifteenth column shows the scattering of the reaction mixture. The sixteenth column shows the absorption of the reaction mixture. The seventeenth column shows the emission of the reaction mixture. The eighteenth column shows the fluorescence of the reaction mixture. The nineteenth column shows the phosphorescence of the reaction mixture. The twentieth column shows the luminescence of the reaction mixture.



TABLE IX

THE FREQUENCY DISTRIBUTION OF I Q's AMONG THE WHITE AND BRAVA CHILDREN OF THE SEVENTH GRADE IN THE PUBLIC SCHOOLS OF MARION, MASSACHUSETTS 1930--1940.

| WHITE I Q's.       |       |    |     |     | BRAVA I Q's.       |       |    |     |     |
|--------------------|-------|----|-----|-----|--------------------|-------|----|-----|-----|
| Scores             | f.    | d. | fd. | fd. | Scores             | f.    | d. | fd. | fd. |
| 120--129           |       |    |     |     | 120--129           |       |    |     |     |
| 110--119           | 1     | 2  | 2   | 4   | 110--119           |       |    |     |     |
| 100--109           | 7     | 1  | 7   | 7   | 100--109           |       |    |     |     |
| 90--99             | 6     | 0  | 0   | 0   | 90--99             |       |    |     |     |
| 80--89             | 3     | -1 | -3  | 3   | 80--89             | 2     | 2  | 4   | 8   |
| 70--79             | 4     | 2  | 8   | 16  | 70--79             | 3     | 1  | 3   | 3   |
| 60--69             |       |    |     |     | 60--69             | 3     | 0  | 0   | 0   |
| 50--59             |       |    |     |     | 50--59             | 2     | -1 | -2  | 2   |
|                    | 21    |    | -2  | 30  |                    | 10    |    | 5   | 13  |
| Mean Score         | 94.05 |    |     |     | Mean Score         | 70.00 |    |     |     |
| Median Score       | 97.00 |    |     |     | Median Score       | 65.00 |    |     |     |
| Standard Deviation | 11.80 |    |     |     | Standard Deviation | 10.20 |    |     |     |

An examination of Table IX results in the following conclusions concerning grade 9:

Fifty per cent (50) of the White cases lie above the median 97.0 and that 50 % of the Brava cases lie above the median 65.0, a difference of 32.0 scores.

The White I Q's are 32.0 scores greater than the Bravas, furthermore, 98.1 % of the Whites equal or exceed the average I Q of the Brava, while not a single member of the Brava group attains the White mean of 94.05.

| Date |       | Description |        | Amount |  |
|------|-------|-------------|--------|--------|--|
| 1900 | Jan 1 | Balance     |        | 100.00 |  |
|      |       | Jan 5       | Jan 5  | 10.00  |  |
|      |       | Jan 10      | Jan 10 | 20.00  |  |
|      |       | Jan 15      | Jan 15 | 30.00  |  |
|      |       | Jan 20      | Jan 20 | 40.00  |  |
|      |       | Jan 25      | Jan 25 | 50.00  |  |
|      |       | Jan 30      | Jan 30 | 60.00  |  |
|      |       | Jan 31      | Jan 31 | 70.00  |  |
|      |       | Feb 1       | Feb 1  | 80.00  |  |
|      |       | Feb 5       | Feb 5  | 90.00  |  |
|      |       | Feb 10      | Feb 10 | 100.00 |  |
|      |       | Feb 15      | Feb 15 | 110.00 |  |
|      |       | Feb 20      | Feb 20 | 120.00 |  |
|      |       | Feb 25      | Feb 25 | 130.00 |  |
|      |       | Feb 30      | Feb 30 | 140.00 |  |
|      |       | Feb 31      | Feb 31 | 150.00 |  |
|      |       | Mar 1       | Mar 1  | 160.00 |  |
|      |       | Mar 5       | Mar 5  | 170.00 |  |
|      |       | Mar 10      | Mar 10 | 180.00 |  |
|      |       | Mar 15      | Mar 15 | 190.00 |  |
|      |       | Mar 20      | Mar 20 | 200.00 |  |
|      |       | Mar 25      | Mar 25 | 210.00 |  |
|      |       | Mar 30      | Mar 30 | 220.00 |  |
|      |       | Mar 31      | Mar 31 | 230.00 |  |
|      |       | Apr 1       | Apr 1  | 240.00 |  |
|      |       | Apr 5       | Apr 5  | 250.00 |  |
|      |       | Apr 10      | Apr 10 | 260.00 |  |
|      |       | Apr 15      | Apr 15 | 270.00 |  |
|      |       | Apr 20      | Apr 20 | 280.00 |  |
|      |       | Apr 25      | Apr 25 | 290.00 |  |
|      |       | Apr 30      | Apr 30 | 300.00 |  |
|      |       | Apr 31      | Apr 31 | 310.00 |  |
|      |       | May 1       | May 1  | 320.00 |  |
|      |       | May 5       | May 5  | 330.00 |  |
|      |       | May 10      | May 10 | 340.00 |  |
|      |       | May 15      | May 15 | 350.00 |  |
|      |       | May 20      | May 20 | 360.00 |  |
|      |       | May 25      | May 25 | 370.00 |  |
|      |       | May 30      | May 30 | 380.00 |  |
|      |       | May 31      | May 31 | 390.00 |  |
|      |       | Jun 1       | Jun 1  | 400.00 |  |
|      |       | Jun 5       | Jun 5  | 410.00 |  |
|      |       | Jun 10      | Jun 10 | 420.00 |  |
|      |       | Jun 15      | Jun 15 | 430.00 |  |
|      |       | Jun 20      | Jun 20 | 440.00 |  |
|      |       | Jun 25      | Jun 25 | 450.00 |  |
|      |       | Jun 30      | Jun 30 | 460.00 |  |
|      |       | Jun 31      | Jun 31 | 470.00 |  |
|      |       | Jul 1       | Jul 1  | 480.00 |  |
|      |       | Jul 5       | Jul 5  | 490.00 |  |
|      |       | Jul 10      | Jul 10 | 500.00 |  |
|      |       | Jul 15      | Jul 15 | 510.00 |  |
|      |       | Jul 20      | Jul 20 | 520.00 |  |
|      |       | Jul 25      | Jul 25 | 530.00 |  |
|      |       | Jul 30      | Jul 30 | 540.00 |  |
|      |       | Jul 31      | Jul 31 | 550.00 |  |
|      |       | Aug 1       | Aug 1  | 560.00 |  |
|      |       | Aug 5       | Aug 5  | 570.00 |  |
|      |       | Aug 10      | Aug 10 | 580.00 |  |
|      |       | Aug 15      | Aug 15 | 590.00 |  |
|      |       | Aug 20      | Aug 20 | 600.00 |  |
|      |       | Aug 25      | Aug 25 | 610.00 |  |
|      |       | Aug 30      | Aug 30 | 620.00 |  |
|      |       | Aug 31      | Aug 31 | 630.00 |  |
|      |       | Sep 1       | Sep 1  | 640.00 |  |
|      |       | Sep 5       | Sep 5  | 650.00 |  |
|      |       | Sep 10      | Sep 10 | 660.00 |  |
|      |       | Sep 15      | Sep 15 | 670.00 |  |
|      |       | Sep 20      | Sep 20 | 680.00 |  |
|      |       | Sep 25      | Sep 25 | 690.00 |  |
|      |       | Sep 30      | Sep 30 | 700.00 |  |
|      |       | Sep 31      | Sep 31 | 710.00 |  |
|      |       | Oct 1       | Oct 1  | 720.00 |  |
|      |       | Oct 5       | Oct 5  | 730.00 |  |
|      |       | Oct 10      | Oct 10 | 740.00 |  |
|      |       | Oct 15      | Oct 15 | 750.00 |  |
|      |       | Oct 20      | Oct 20 | 760.00 |  |
|      |       | Oct 25      | Oct 25 | 770.00 |  |
|      |       | Oct 30      | Oct 30 | 780.00 |  |
|      |       | Oct 31      | Oct 31 | 790.00 |  |
|      |       | Nov 1       | Nov 1  | 800.00 |  |
|      |       | Nov 5       | Nov 5  | 810.00 |  |
|      |       | Nov 10      | Nov 10 | 820.00 |  |
|      |       | Nov 15      | Nov 15 | 830.00 |  |
|      |       | Nov 20      | Nov 20 | 840.00 |  |
|      |       | Nov 25      | Nov 25 | 850.00 |  |
|      |       | Nov 30      | Nov 30 | 860.00 |  |
|      |       | Nov 31      | Nov 31 | 870.00 |  |
|      |       | Dec 1       | Dec 1  | 880.00 |  |
|      |       | Dec 5       | Dec 5  | 890.00 |  |
|      |       | Dec 10      | Dec 10 | 900.00 |  |
|      |       | Dec 15      | Dec 15 | 910.00 |  |
|      |       | Dec 20      | Dec 20 | 920.00 |  |
|      |       | Dec 25      | Dec 25 | 930.00 |  |
|      |       | Dec 30      | Dec 30 | 940.00 |  |
|      |       | Dec 31      | Dec 31 | 950.00 |  |

TABLE X

THE FREQUENCY DISTRIBUTION OF I Q's AMONG THE WHITE AND  
BRAVA CHILDREN OF THE EIGHTH GRADE IN THE PUBLIC SCHOOLS  
OF MARION, MASSACHUSETTS 1930--1940.

| WHITE I Q's.       |       |    |     |     | BRAVA I Q's.       |       |    |     |     |
|--------------------|-------|----|-----|-----|--------------------|-------|----|-----|-----|
| Scores             | f.    | d. | fd. | fd. | Scores             | f.    | d. | fd. | fd. |
| 120--129           |       |    |     |     | 120--129           |       |    |     |     |
| 110--119           | 3     | 2  | 6   | 12  | 110--119           |       |    |     |     |
| 100--109           | 3     | 1  | 3   | 3   | 100--109           | 1     | 2  | 2   | 4   |
| 90--99             | 1     | 0  | 0   | 0   | 90--99             | 1     | 1  | 1   | 1   |
| 80--89             | 3     | -1 | -3  | 3   | 80--89             | 0     | 0  | 0   | 0   |
| 70--79             | 2     | 2  | 4   | 8   | 70--79             | 2     | -1 | -2  | 2   |
| 60--69             |       |    |     |     | 60--69             | 2     | 2  | 4   | 8   |
| 50--59             |       |    |     |     | 50--59             |       |    |     |     |
|                    | 12    |    | 2   | 26  |                    | 6     |    | -3  | 15  |
| Mean Score         | 96.60 |    |     |     | Mean Score         | 80.00 |    |     |     |
| Median Score       | 95.00 |    |     |     | Median Score       | 75.00 |    |     |     |
| Standard Deviation | 14.60 |    |     |     | Standard Deviation | 15.00 |    |     |     |

An examination of Table X results in the following conclusions concerning grade 8:

Fifty per cent (50) of the White cases lie above the median 95.0 and that 50 % of the Brava cases lie above the median 75.0, a difference of 20.0 scores.

The White I Q's are 20.0 scores greater than the Bravas, furthermore, 80.8 % of the Whites equal or exceed the average I Q of the Brava, while 33.3 % of the Brava group attain or exceed the White mean of 96.60.





TABLE XI

THE FREQUENCY DISTRIBUTION OF I Q's AMONG THE WHITE AND BRAVA CHILDREN OF THE NINTH GRADE IN THE PUBLIC SCHOOLS OF MARION, MASSACHUSETTS 1930--1940.

| WHITE I Q's.       |       |    |     |     | BRAVA I Q's.       |       |    |     |     |
|--------------------|-------|----|-----|-----|--------------------|-------|----|-----|-----|
| Scores             | f.    | d. | fd. | fd. | Scores             | f.    | d. | fd. | fd. |
| 120--129           |       |    |     |     | 120--129           |       |    |     |     |
| 110--119           | 1     | 2  | 2   | 4   | 110--119           |       |    |     |     |
| 100--109           | 3     | 1  | 3   | 3   | 100--109           |       |    |     |     |
| 90--99             | 3     | 0  | 0   | 0   | 90--99             | 1     | 2  | 2   | 4   |
| 80--89             | 2     | -1 | -2  | 2   | 80--89             | 2     | 1  | 2   | 2   |
| 70--79             | 2     | 2  | 4   | 8   | 70--79             | 2     | 0  | 0   | 0   |
| 60--69             | 1     | 3  | 3   | 9   | 60--69             | 3     | -1 | -3  | 3   |
| 50--59             |       |    |     |     | 50--59             |       |    |     |     |
|                    | 12    |    | -4  | 26  |                    | 8     |    | 1   | 9   |
| Mean Score         | 91.70 |    |     |     | Mean Score         | 76.25 |    |     |     |
| Median Score       | 93.30 |    |     |     | Median Score       | 75.00 |    |     |     |
| Standard Deviation | 14.30 |    |     |     | Standard Deviation | 14.00 |    |     |     |

An examination of Table XI results in the following conclusions concerning grade 9:

Fifty per cent (50) of the White cases lie above the median 93.3 and that 50 % of the Brava cases lie above the median 75.0, a difference of 18.3 scores.

The White I Q's are 18.3 scores greater than the Bravas, furthermore, 90.0 % of the Whites equal or exceed the average I Q of the Brava, while only 12.5 % of the Brava group attain or exceed the White mean of 91.70.

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TABLE XII

THE FREQUENCY DISTRIBUTION OF I Q's AMONG THE WHITE AND BRAVA CHILDREN OF THE TOTAL ENROLLMENT IN THE PUBLIC SCHOOLS OF MARION, MASSACHUSETTS 1930--1940.

| WHITE I Q's.       |       |    |     |     | BRAVA I Q's.       |       |    |     |     |
|--------------------|-------|----|-----|-----|--------------------|-------|----|-----|-----|
| Scores             | f.    | d. | fd. | fd. | Scores             | f.    | d. | fd. | fd. |
| 120--129           | 6     | 3  | 18  | 54  | 120--129           |       |    |     |     |
| 110--119           | 26    | 2  | 52  | 104 | 110--119           |       |    |     |     |
| 100--109           | 35    | 1  | 35  | 35  | 100--109           | 4     | 3  | 12  | 36  |
| 90--99             | 29    | 0  | 0   | 0   | 90--99             | 11    | 2  | 22  | 44  |
| 80--89             | 40    | -1 | -40 | 40  | 80--89             | 35    | 1  | 35  | 35  |
| 70--79             | 20    | 2  | 40  | 80  | 70--79             | 34    | 0  | 0   | 0   |
| 60--69             | 5     | 3  | 18  | 54  | 60--69             | 26    | 2  | 52  | 104 |
| 50--59             |       |    |     |     | 50--59             | 9     | 3  | 27  | 81  |
|                    | 161   |    | 7   | 367 |                    | 119   |    | -10 | 300 |
| Mean Score         | 95.4  |    |     |     | Mean Score         | 74.18 |    |     |     |
| Median Score       | 95.5  |    |     |     | Median Score       | 77.3  |    |     |     |
| Standard Deviation | 15.00 |    |     |     | Standard Deviation | 15.80 |    |     |     |

An examination of Table XII results in the following conclusions concerning the total enrollment:

Fifty per cent (50) of the White cases lie above the median 95.5 and that 50% of the Brava cases lie above the median 77.3, a difference of 18.2 scores.

The White I Q's are 18.2 scores greater than the Bravas; furthermore, 96.0 % of the Whites equal or exceed the average I Q of the Brava, while but 12.6 % of the entire Brava group attain or exceed the average White mean of 95.40.





TABLE XIII  
SUMMARY OF TABLES III --- XII CONCERNING THE WHITE INTELLIGENCE QUOTIENTS

| Grades  | Number<br>Enrolled | Mean   | Median | Standard<br>Deviation | Per Cent Equal or<br>Exceed Brava Mean |
|---------|--------------------|--------|--------|-----------------------|--|
| 1       | 16                 | 101.25 | 95.00  | 12.60                 | 92.1%                                  |
| 2       | 19                 | 101.85 | 105.00 | 16.80                 | 83.2%                                  |
| 3       | 30                 | 91.45  | 88.12  | 14.20                 | 90.6%                                  |
| 4       | 22                 | 96.81  | 95.00  | 14.60                 | 89.4%                                  |
| 5       | 12                 | 85.33  | 87.50  | 14.70                 | 82.5%                                  |
| 6       | 17                 | 99.71  | 102.50 | 15.70                 | 97.2%                                  |
| 7       | 21                 | 94.05  | 97.00  | 11.80                 | 98.1%                                  |
| 8       | 12                 | 96.60  | 95.00  | 14.60                 | 80.8%                                  |
| 9       | 12                 | 91.70  | 93.30  | 14.30                 | 90.0%                                  |
| Summary | 161                | 95.40  | 95.50  | 15.00                 | 96.0%                                  |

(Note - A detailed explanation of each group of figures may be had by consulting Tables III to XII.)

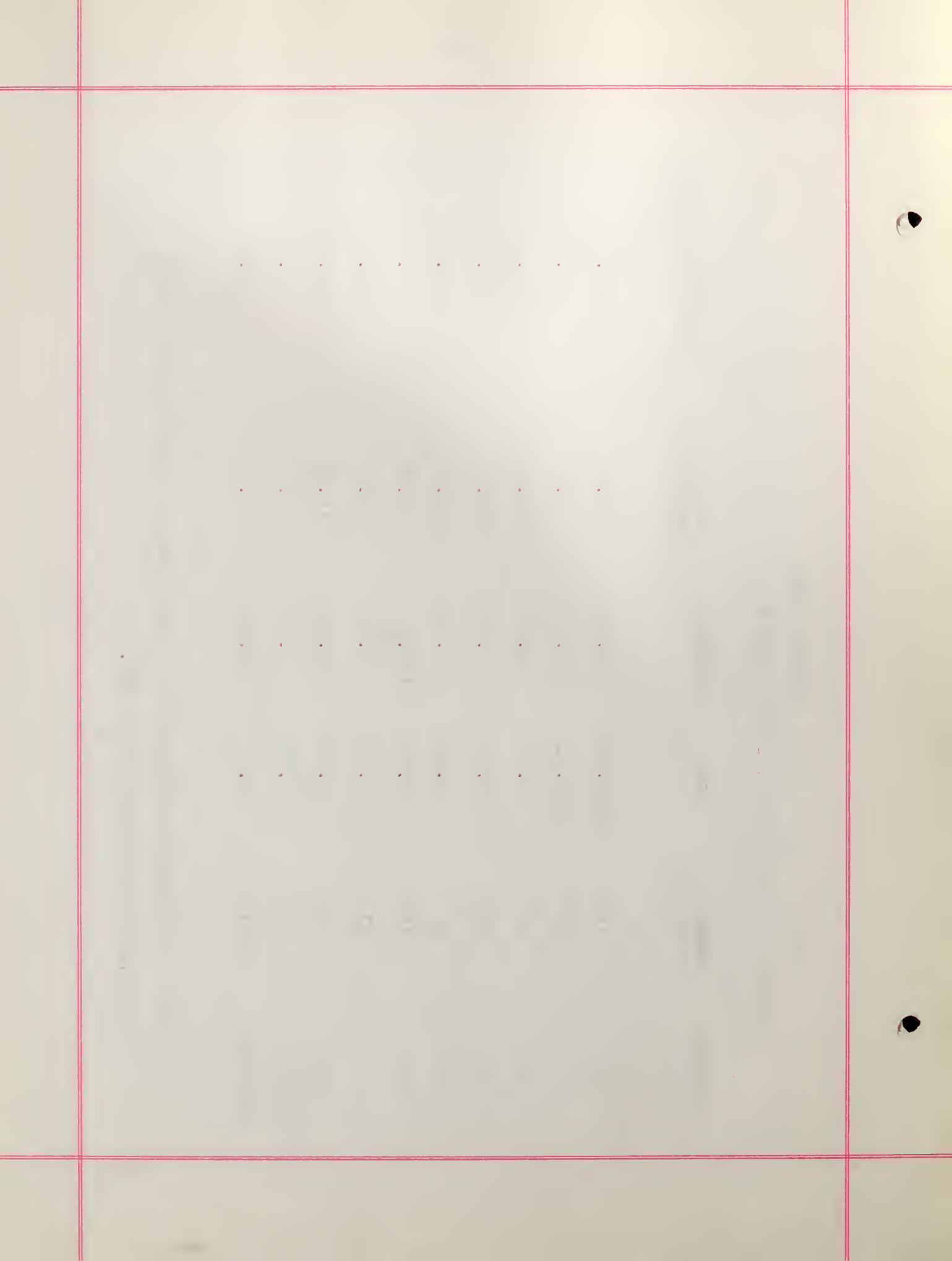
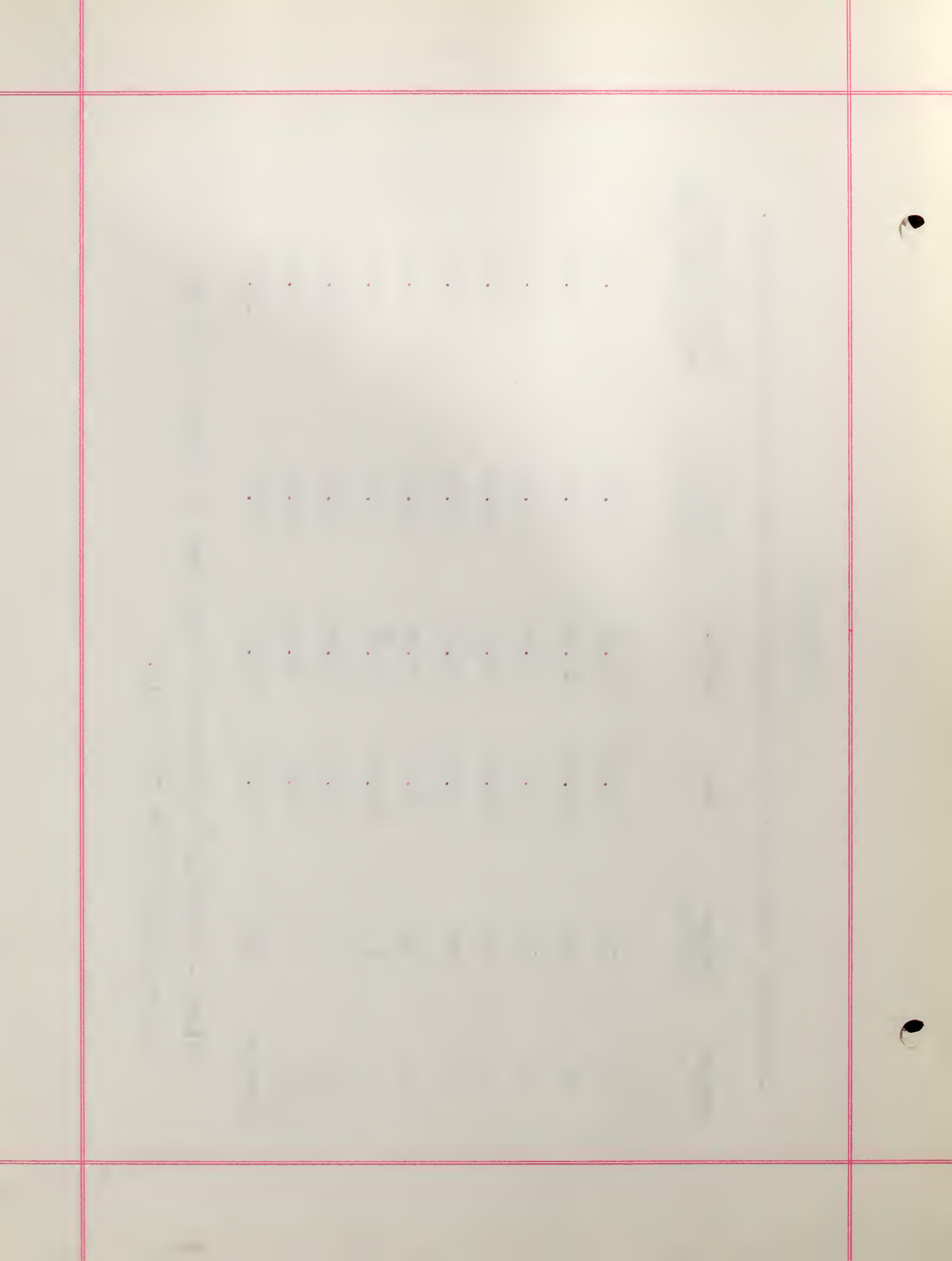


TABLE XIV  
SUMMARY OF TABLES III --- XII CONCERNING THE BRAVA INTELLIGENCE QUOTIENTS.

| Grades  | Number<br>Enrolled | Mean  | Median | Standard<br>Deviation | Per Cent Equal or<br>Exceed White Mean |
|---------|--------------------|-------|--------|-----------------------|--|
| 1       | 15                 | 88.13 | 88.30  | 11.50                 | 0.00%                                  |
| 2       | 23                 | 80.60 | 82.20  | 10.10                 | 0.00                                   |
| 3       | 10                 | 79.00 | 75.00  | 9.10                  | 10.00                                  |
| 4       | 20                 | 74.50 | 75.00  | 15.00                 | 5.00                                   |
| 5       | 17                 | 78.30 | 75.50  | 13.40                 | 29.40                                  |
| 6       | 11                 | 72.30 | 75.00  | 11.30                 | 0.00                                   |
| 7       | 10                 | 70.00 | 65.00  | 10.20                 | 0.00                                   |
| 8       | 6                  | 80.00 | 75.00  | 15.00                 | 33.33                                  |
| 9       | 8                  | 76.25 | 75.00  | 14.00                 | 12.50                                  |
| Summary | 119                | 74.18 | 77.30  | 15.80                 | 12.60                                  |

(Note - A detailed explanation of each group of figures may be had by consulting Tables III to XII.)





## CHAPTER IV

### STANFORD ACHIEVEMENT TESTS

( Primary - Intermediate - Advanced - Batteries )

In order to have authoritative statistics as a means of comparing the Brava and White children for this study, the Stanford Achievement Test was administered in May, 1941. The results made it possible to compare the abilities and skills of the two groups with the national standards of attainment.

The testing program was under the personal supervision of Mr. John Glenn, Superintendent of Schools, Marion, Massachusetts. The tests were given in grades 2--9 inclusive and in as normal situations as humanly possible.

The tests were corrected by a group of four junior high teachers supervised by Mr. Glenn. The junior high school teachers corrected those tests which applied to their particular subjects in grades 6--9, inclusive, while the tests of grades 2--5 were corrected by Mr. Glenn and the reading supervisor.

(Note---Throughout the discussion of the test, equated scores will be used instead of raw scores. The most important characteristics of an equated score is that it has the same significance, no matter in what battery or test it may appear. Thus, the equated scores act as a kind of universal language for making comparisons.)

## THE HISTORY OF THE

REIGN OF KING CHARLES THE FIRST

IN THE YEAR OF HIS MAJESTY'S REIGN

THE SECOND YEAR OF HIS MAJESTY'S REIGN

THE THIRD YEAR OF HIS MAJESTY'S REIGN

THE FOURTH YEAR OF HIS MAJESTY'S REIGN

THE FIFTH YEAR OF HIS MAJESTY'S REIGN

THE SIXTH YEAR OF HIS MAJESTY'S REIGN

THE SEVENTH YEAR OF HIS MAJESTY'S REIGN

THE EIGHTH YEAR OF HIS MAJESTY'S REIGN

THE NINTH YEAR OF HIS MAJESTY'S REIGN

THE TENTH YEAR OF HIS MAJESTY'S REIGN

THE ELEVENTH YEAR OF HIS MAJESTY'S REIGN

THE TWELFTH YEAR OF HIS MAJESTY'S REIGN

THE THIRTEENTH YEAR OF HIS MAJESTY'S REIGN

THE FOURTEENTH YEAR OF HIS MAJESTY'S REIGN

THE FIFTEENTH YEAR OF HIS MAJESTY'S REIGN

THE SIXTEENTH YEAR OF HIS MAJESTY'S REIGN

THE SEVENTEENTH YEAR OF HIS MAJESTY'S REIGN

THE EIGHTEENTH YEAR OF HIS MAJESTY'S REIGN

THE NINETEENTH YEAR OF HIS MAJESTY'S REIGN

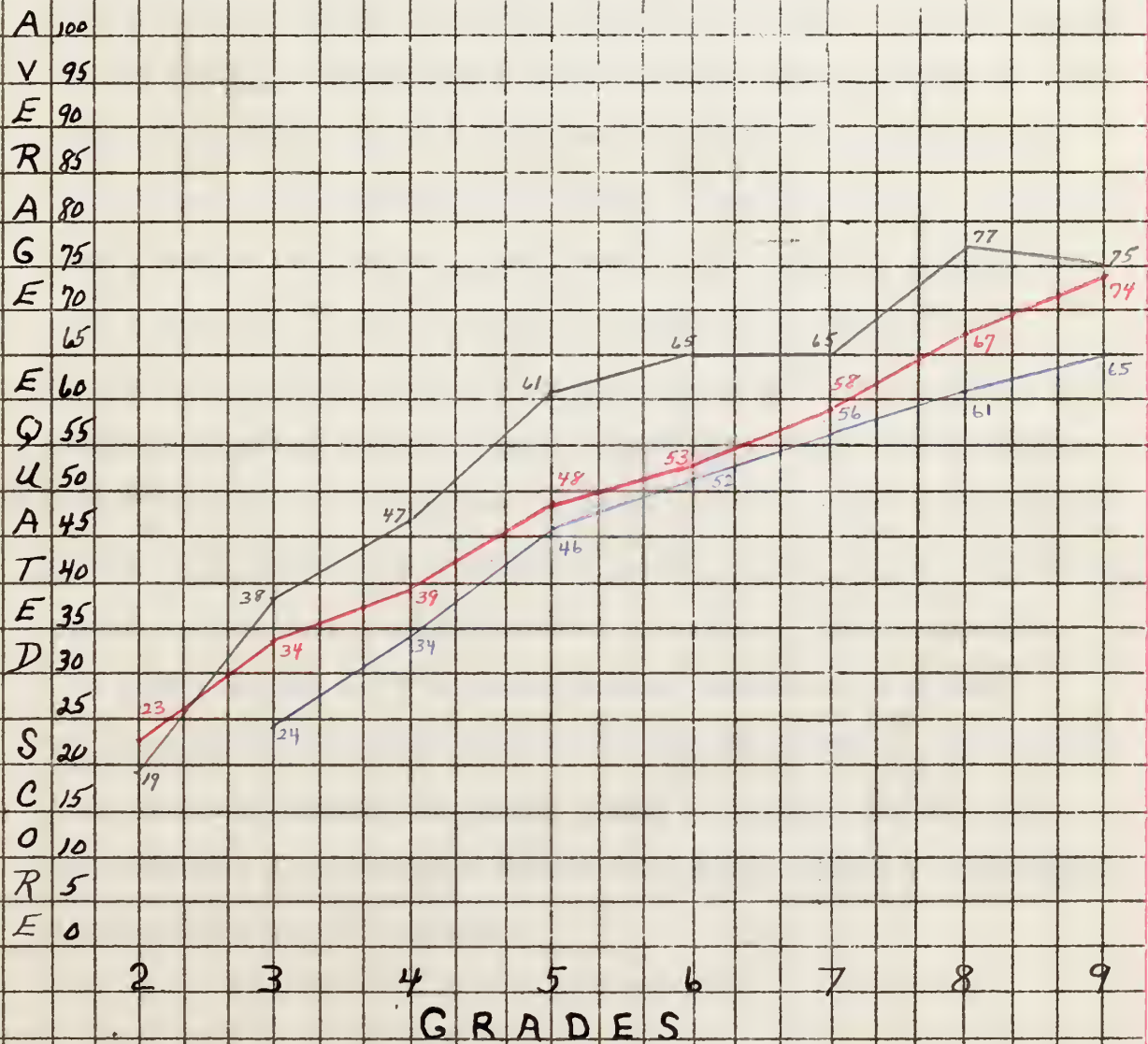
THE TWENTIETH YEAR OF HIS MAJESTY'S REIGN

THE TWENTY-FIRST YEAR OF HIS MAJESTY'S REIGN

THE TWENTY-SECOND YEAR OF HIS MAJESTY'S REIGN

GRAPH 17

THE WHITE AND BRAVA RESULTS OF THE STANFORD ACHIEVEMENT  
TEST IN ARITHMETIC COMPUTATION IN THE PUBLIC SCHOOLS OF  
MARION, MASSACHUSETTS MAY, 1940..



Key

Whites

Bravas

Norm

THE UNIVERSITY OF CHICAGO  
DEPARTMENT OF CHEMISTRY

PHYSICAL CHEMISTRY

| TABLE I    |                   |
|------------|-------------------|
| Time (min) | Concentration (M) |
| 0          | 0.000             |
| 10         | 0.001             |
| 20         | 0.002             |
| 30         | 0.003             |
| 40         | 0.004             |
| 50         | 0.005             |
| 60         | 0.006             |
| 70         | 0.007             |
| 80         | 0.008             |
| 90         | 0.009             |
| 100        | 0.010             |
| 110        | 0.011             |
| 120        | 0.012             |
| 130        | 0.013             |
| 140        | 0.014             |
| 150        | 0.015             |
| 160        | 0.016             |
| 170        | 0.017             |
| 180        | 0.018             |
| 190        | 0.019             |
| 200        | 0.020             |
| 210        | 0.021             |
| 220        | 0.022             |
| 230        | 0.023             |
| 240        | 0.024             |
| 250        | 0.025             |
| 260        | 0.026             |
| 270        | 0.027             |
| 280        | 0.028             |
| 290        | 0.029             |
| 300        | 0.030             |
| 310        | 0.031             |
| 320        | 0.032             |
| 330        | 0.033             |
| 340        | 0.034             |
| 350        | 0.035             |
| 360        | 0.036             |
| 370        | 0.037             |
| 380        | 0.038             |
| 390        | 0.039             |
| 400        | 0.040             |
| 410        | 0.041             |
| 420        | 0.042             |
| 430        | 0.043             |
| 440        | 0.044             |
| 450        | 0.045             |
| 460        | 0.046             |
| 470        | 0.047             |
| 480        | 0.048             |
| 490        | 0.049             |
| 500        | 0.050             |
| 510        | 0.051             |
| 520        | 0.052             |
| 530        | 0.053             |
| 540        | 0.054             |
| 550        | 0.055             |
| 560        | 0.056             |
| 570        | 0.057             |
| 580        | 0.058             |
| 590        | 0.059             |
| 600        | 0.060             |
| 610        | 0.061             |
| 620        | 0.062             |
| 630        | 0.063             |
| 640        | 0.064             |
| 650        | 0.065             |
| 660        | 0.066             |
| 670        | 0.067             |
| 680        | 0.068             |
| 690        | 0.069             |
| 700        | 0.070             |
| 710        | 0.071             |
| 720        | 0.072             |
| 730        | 0.073             |
| 740        | 0.074             |
| 750        | 0.075             |
| 760        | 0.076             |
| 770        | 0.077             |
| 780        | 0.078             |
| 790        | 0.079             |
| 800        | 0.080             |
| 810        | 0.081             |
| 820        | 0.082             |
| 830        | 0.083             |
| 840        | 0.084             |
| 850        | 0.085             |
| 860        | 0.086             |
| 870        | 0.087             |
| 880        | 0.088             |
| 890        | 0.089             |
| 900        | 0.090             |
| 910        | 0.091             |
| 920        | 0.092             |
| 930        | 0.093             |
| 940        | 0.094             |
| 950        | 0.095             |
| 960        | 0.096             |
| 970        | 0.097             |
| 980        | 0.098             |
| 990        | 0.099             |
| 1000       | 0.100             |



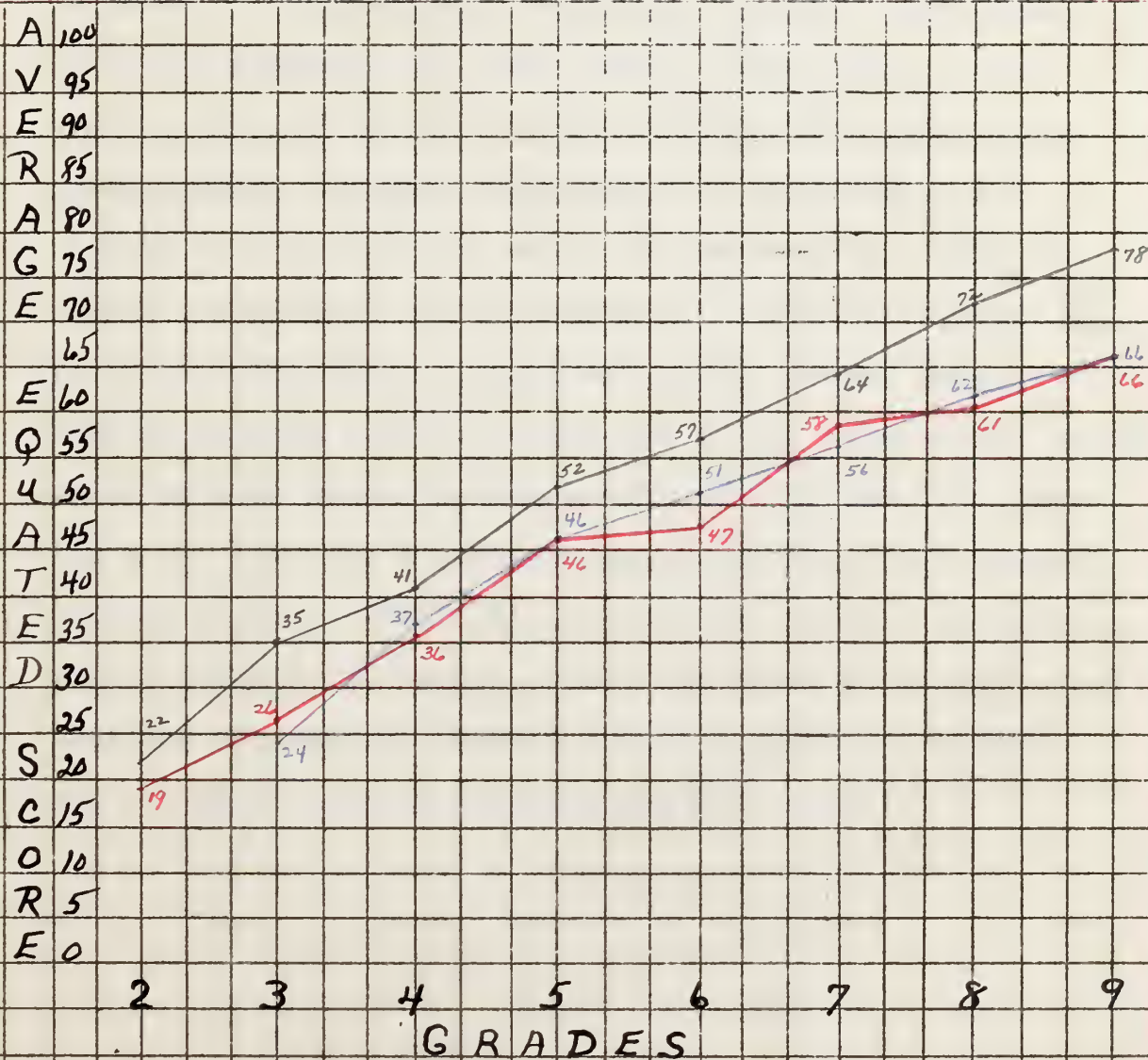
Graph 17 indicates that in grade 2 the Brava group surpassed the White children by 4 equated scores, but in grade 9 the White group ranked 1 equated score above the Brava group indicating that the White group showed during their school career an improvement of 5 more equated scores in Arithmetic Computation than did the Brava group. At no time did either group go below the average equated score (the norm). The Brava group shows constant gradual improvement, while the White group reach a plateau in grades 6 and 7 and do not do so well in grade 9 as they did in grade 8. In grade 3 the Brava group is 10 scores above the average equated score, while the White is 14 scores above, a difference of 4 equated scores; but in grade 9 the Brava group is 9 above the average equated score, while the White group is 10 above, a difference of only 1 equated score. The Brava group is 3 equated scores nearer the White equated score in grade 9 than it was in grade 3. The Whites show no improvement in grade 7 and in grade 9 show less improvement (-2 scores), while the Brava shows a continual improvement in all grades.





GRAPH 18

THE WHITE AND BRAVA RESULTS OF THE STANFORD ACHIEVEMENT  
TEST IN ARITHMETIC REASONING IN THE PUBLIC SCHOOLS OF  
MARION, MASSACHUSETTS MAY, 1940.



Key

Whites —  
Bravas —  
Norm. —



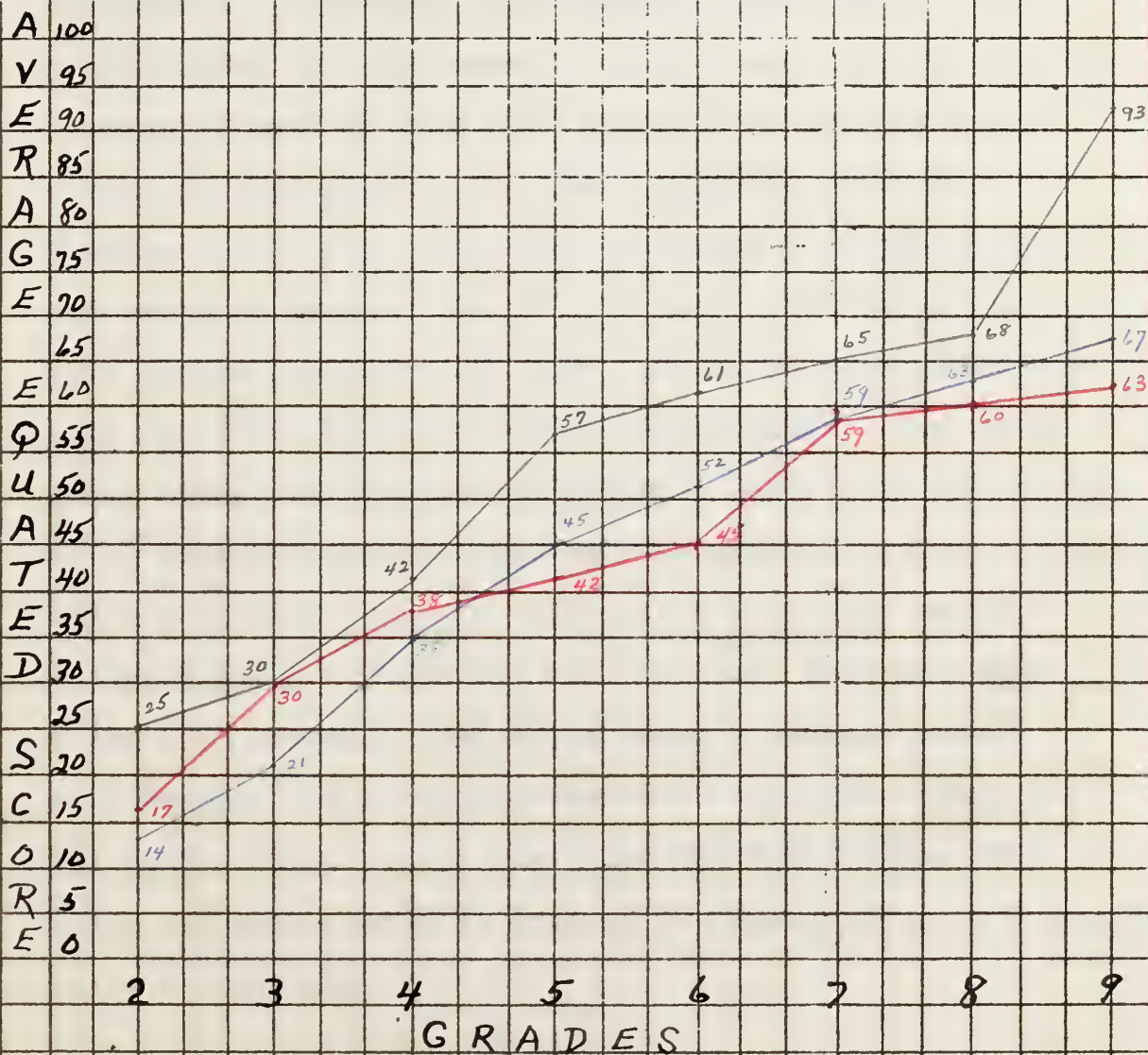
Graph 18 indicates that in grade 2 ~~that~~ there is between the White and the Brava groups a difference of only 3 equated scores as compared to a difference of 12 scores in grade 9. In Arithmetic Reasoning the White achievement is 4 times greater than the average achievement of the Brava group during their school careers. The White group shows gradual constant improvement of an average of 8 equated scores annually, while the Brava group shows an annual improvement of an average of 6 equated scores. At no time is the White group fewer than 4 scores above the average equated score, as compared to the Brava group, which is never more than 2 scores above and in grade 3 is below the norm. The White group shows the greatest achievement between grades 4 and 5 (11 scores) and the least between grades 5 and 6 (5 scores), while the Brava shows the greatest achievement between grades 6 and 7 (11 scores) and the least between grades 5 and 6 (1 score).





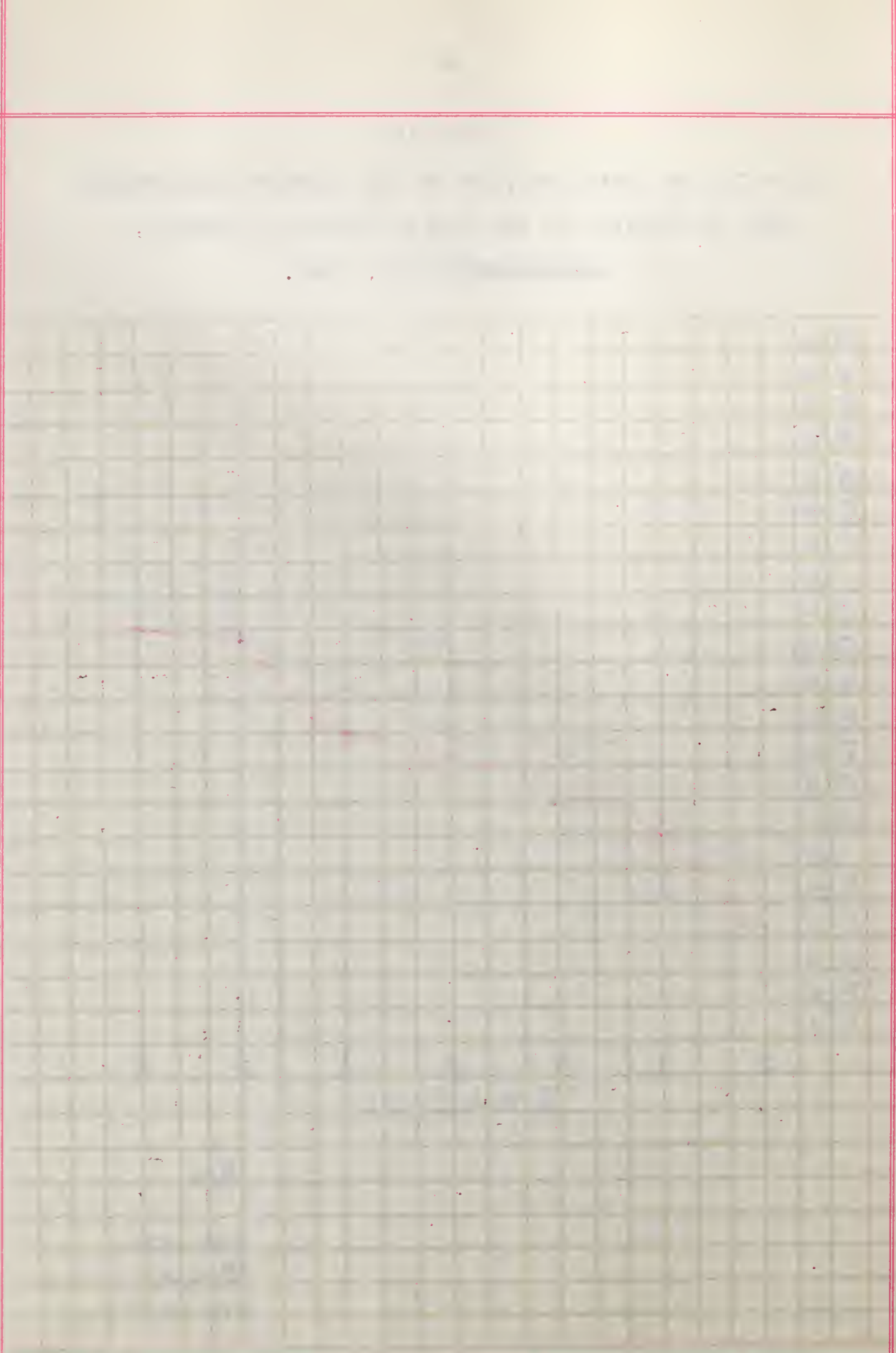
## GRAPH 19

THE WHITE AND BRAVA RESULTS OF THE STANFORD ACHIEVEMENT  
TEST IN READING IN THE PUBLIC SCHOOLS OF MARION,  
MASSACHUSETTS MAY, 1940.



Key

Whites —  
Bravas —  
Norm —



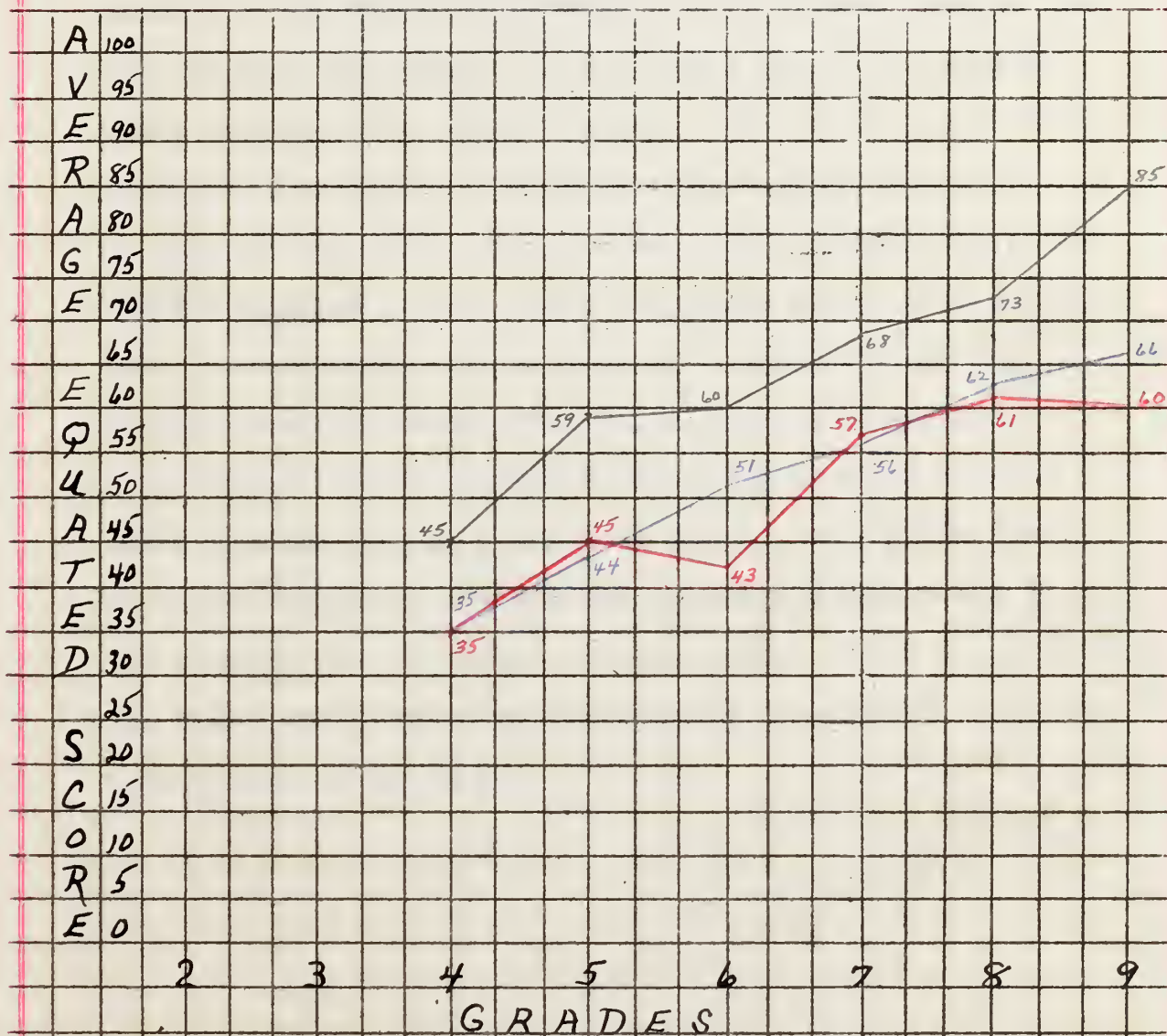
Graph 19 indicates that in grade 2 there is between the White and the Brava groups a difference of only 8 equated scores as compared to a difference of 30 scores in grade 9. The White achievement is therefore 4 times greater than the achievement of the Brava group in Reading (paragraph meaning plus word meaning) during the school career of each group. The Brava improves each year in Reading but is slow, reaching a plateau in grades 5 and 6 and again in grades 7 and 8. Up until the fourth grade both groups are above the norm, but at no time after that does the Brava reach or surpass the average. The Brava group shows the greatest achievement between grades 5 and 6 (14 scores) and the least between grades 7 and 8 (1 score) while the Whites show the greatest achievement between grades 8 and 9 (25 scores) and the least between grades 7 and 8 (3 scores). The White group's average annual achievement is 9.7 equated scores as compared to 6.5 for the Brava group. At no time does the White group fall below the norm, while in grade 9 the Brava group is 4 scores below the average.





## GRAPH 20

THE WHITE AND BRAVA RESULTS OF THE STANFORD ACHIEVEMENT  
TEST IN LANGUAGE USAGE IN THE PUBLIC SCHOOLS OF MARION,  
MASSACHUSETTS MAY, 1940.



Key

Whites —  
Bravas —  
Norm —



Graph 20 indicates that in grade 4 ~~that~~ there is between the White and the Brava groups a difference of 10 equated scores as compared to a difference of 25 scores in grade 9. The White achievement is 2.5 times greater than the average achievement of the Brava group in Language Usage during their school career. The White group shows constant improvement, while the Brava group does not. At no time is the White group fewer than 9 scores above the average equated score, while the Brava group is never more than 1 score above and as many as 8 scores below the average equated score. The White shows the greatest achievement between grades 4 and 5 (14 scores) and the least between grades 5 and 6 (1 score), while the Brava shows the greatest achievement between grades 6 and 7 (14 scores) and the least between grades 5 and 6 (-2 scores). The Brava group shows no improvement in grade 9 over its achievement in grade 8.



1. The first part of the document is a letter from the President of the United States to the Congress, dated January 3, 1801. The letter is addressed to the Senate and House of Representatives, and is signed by James Madison. The letter discusses the state of the Union and the progress of the government since the inauguration of Thomas Jefferson on March 4, 1801. The letter also discusses the recent acquisition of the Louisiana Territory and the importance of maintaining peace and harmony with the neighboring nations.

2. The second part of the document is a report from the Secretary of the Treasury, dated January 3, 1801. The report is addressed to the Senate and House of Representatives, and is signed by Alexander Hamilton. The report discusses the state of the Treasury and the progress of the government since the inauguration of Thomas Jefferson on March 4, 1801. The report also discusses the recent acquisition of the Louisiana Territory and the importance of maintaining peace and harmony with the neighboring nations.

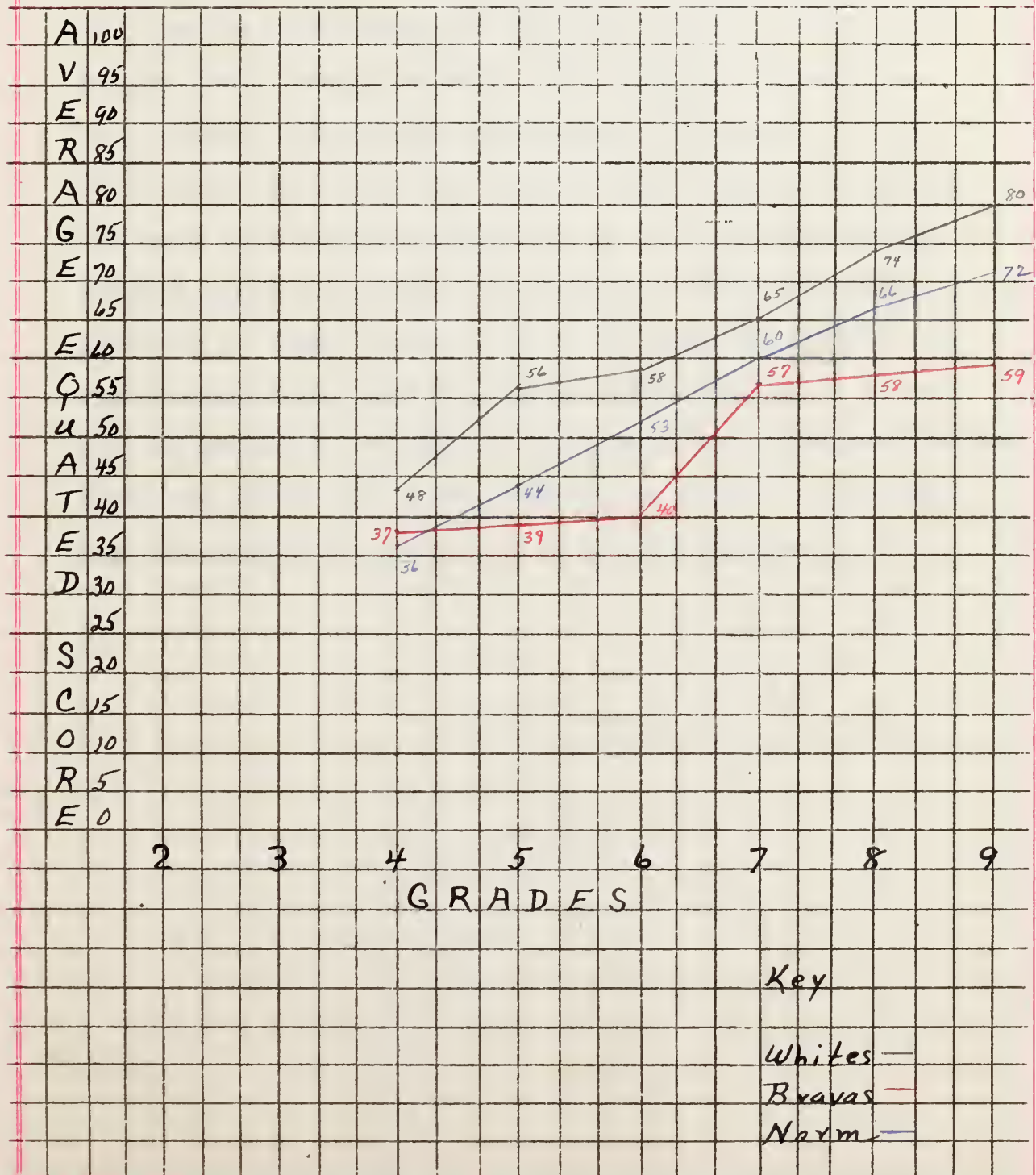
3. The third part of the document is a report from the Secretary of the Navy, dated January 3, 1801. The report is addressed to the Senate and House of Representatives, and is signed by John Adams. The report discusses the state of the Navy and the progress of the government since the inauguration of Thomas Jefferson on March 4, 1801. The report also discusses the recent acquisition of the Louisiana Territory and the importance of maintaining peace and harmony with the neighboring nations.

4. The fourth part of the document is a report from the Secretary of the War, dated January 3, 1801. The report is addressed to the Senate and House of Representatives, and is signed by Henry Knox. The report discusses the state of the War and the progress of the government since the inauguration of Thomas Jefferson on March 4, 1801. The report also discusses the recent acquisition of the Louisiana Territory and the importance of maintaining peace and harmony with the neighboring nations.

5. The fifth part of the document is a report from the Secretary of the Interior, dated January 3, 1801. The report is addressed to the Senate and House of Representatives, and is signed by Thomas Mifflin. The report discusses the state of the Interior and the progress of the government since the inauguration of Thomas Jefferson on March 4, 1801. The report also discusses the recent acquisition of the Louisiana Territory and the importance of maintaining peace and harmony with the neighboring nations.

GRAPH 21

THE WHITE AND BRAVA RESULTS OF THE STANFORD ACHIEVEMENT  
TEST IN LITERATURE IN THE PUBLIC SCHOOLS OF MARION,  
MASSACHUSETTS MAY, 1940.





Graph 21 indicates that in grade 4 ~~that~~ there is between the White and the Brava groups a difference of 11 equated scores as compared to a difference of 21 scores in grade 9. The White achievement is 1.9 times greater than the average achievement of the Brava group in Literature during their school career. Both groups show constant improvement, but the annual average achievement of the White group is 1.2 scores greater than that of the Brava. The only time that the Brava group is above the average equated score is in grade 4 (1 score), while the White group is at least 5 scores above it in every grade. The Brava group shows little progress in grades 5, 6, 8 and 9 and the greatest in grade 7 (17 scores ), as compared to the White, who shows the least progress in grade 6 (2 scores), and the greatest achievement in grade 8 (9 scores).



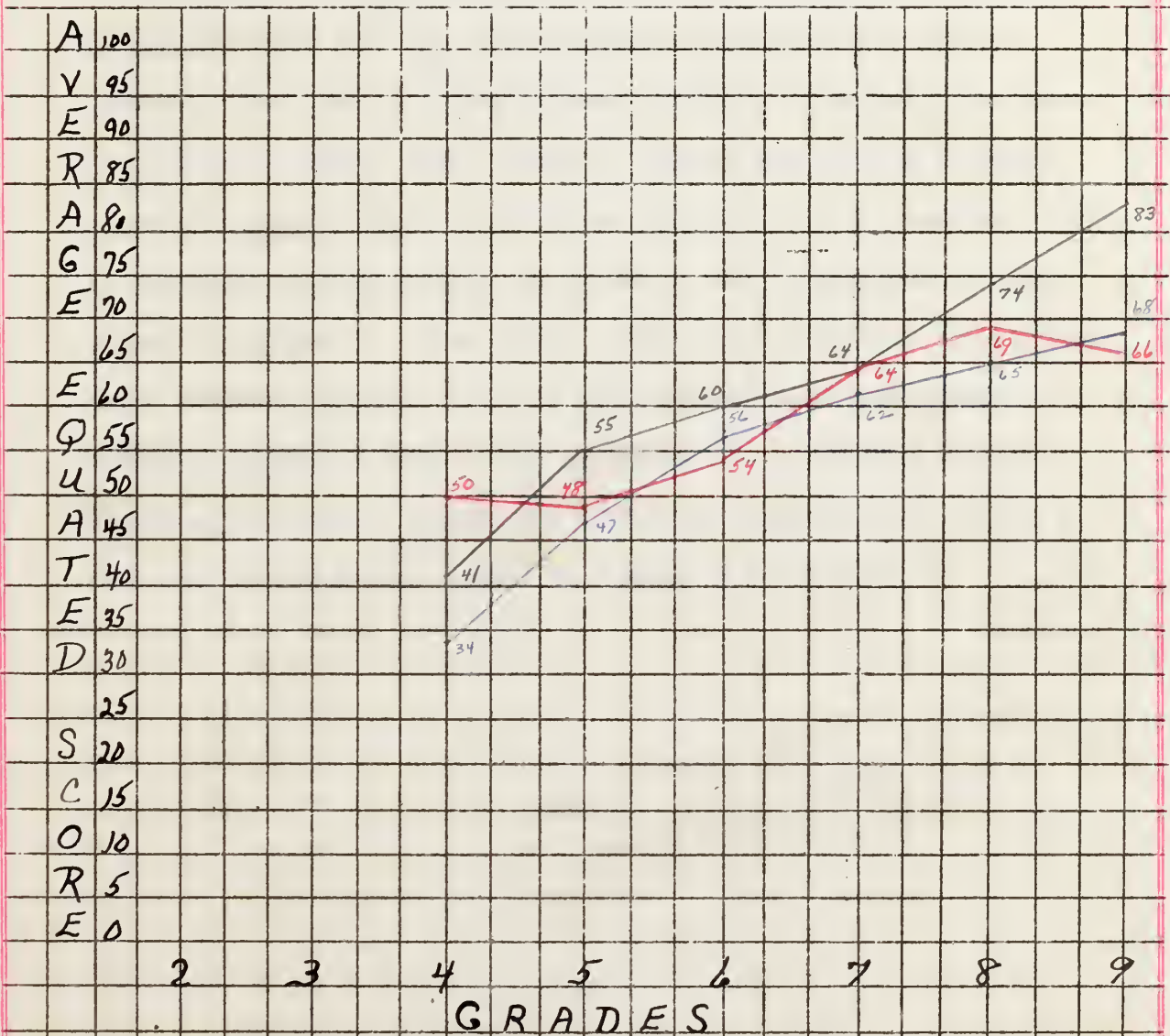
1. The first part of the report deals with the general situation of the country and the position of the various groups of the population. It is a very interesting and detailed study of the social and economic conditions of the country. The author has done a great deal of research and has collected a large amount of material. The report is well written and is easy to read. It is a valuable contribution to the knowledge of the country and its people.

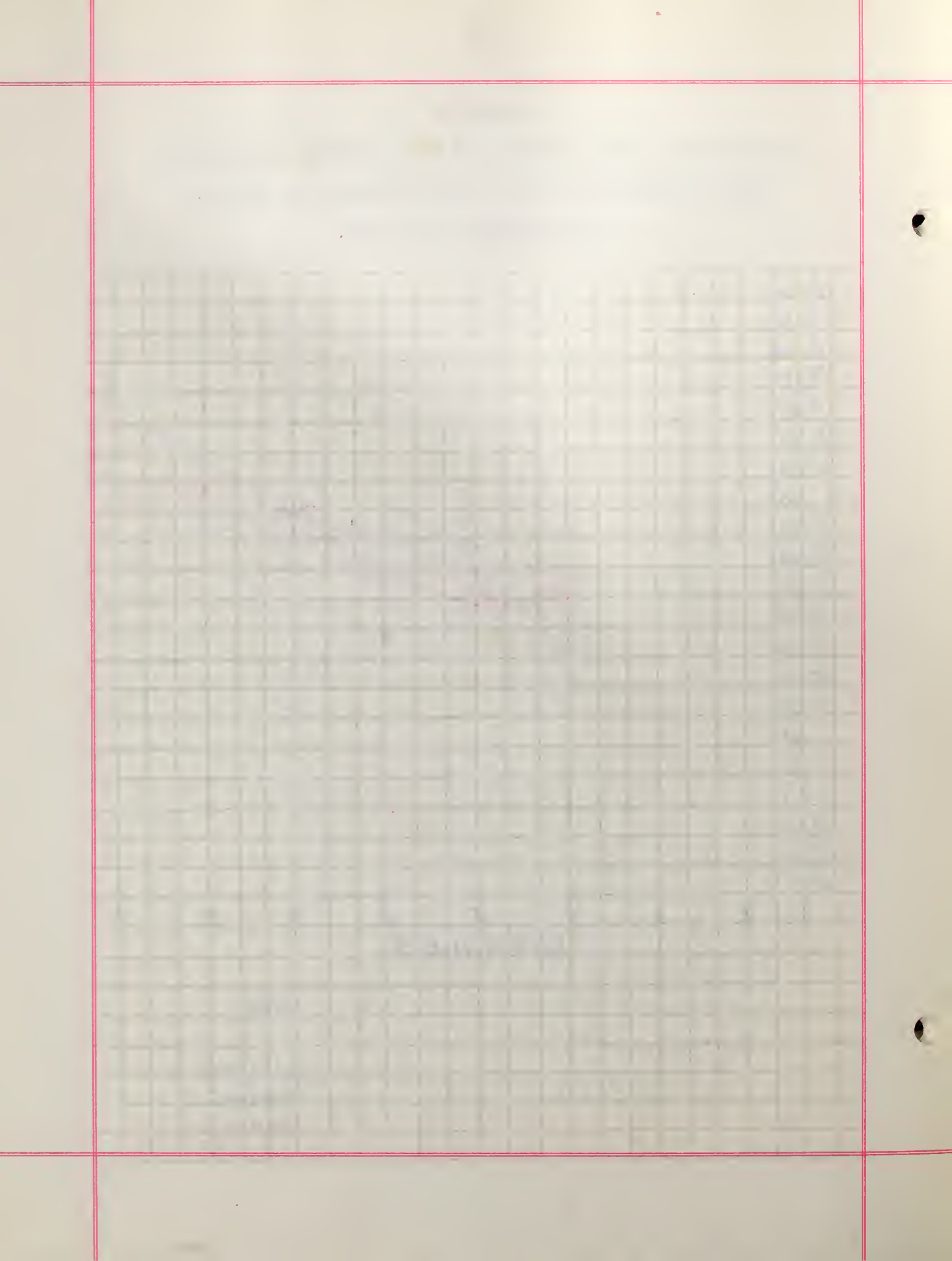
2. The second part of the report deals with the history of the country and the development of its various institutions. It is a very interesting and detailed study of the history of the country and the development of its various institutions. The author has done a great deal of research and has collected a large amount of material. The report is well written and is easy to read. It is a valuable contribution to the knowledge of the country and its people.

3. The third part of the report deals with the present situation of the country and the future prospects. It is a very interesting and detailed study of the present situation of the country and the future prospects. The author has done a great deal of research and has collected a large amount of material. The report is well written and is easy to read. It is a valuable contribution to the knowledge of the country and its people.

## GRAPH 22

THE WHITE AND BRAVA RESULTS OF THE STANFORD ACHIEVEMENT  
TEST IN SPELLING IN THE PUBLIC SCHOOLS OF MARION,  
MASSACHUSETTS MAY, 1940.





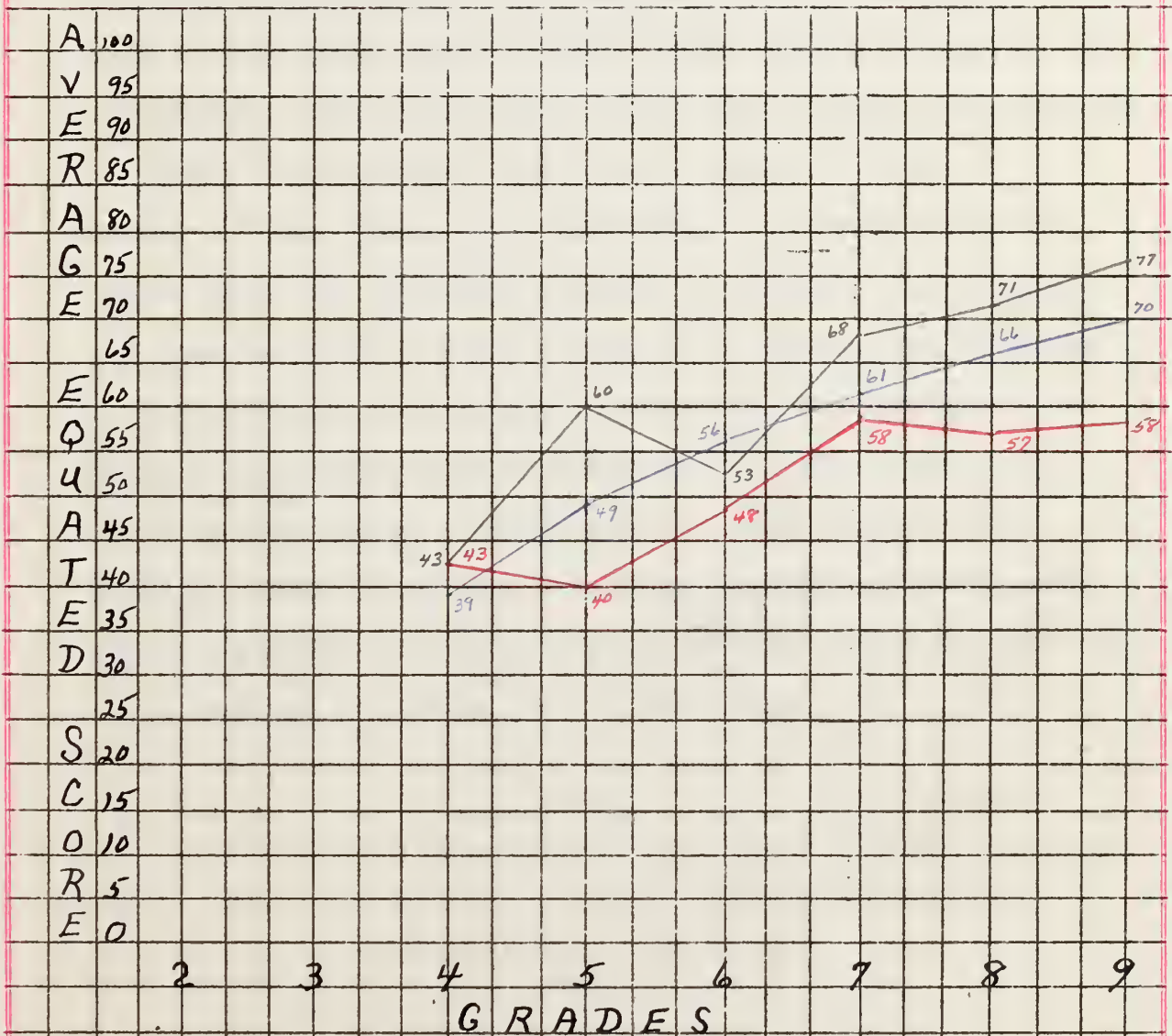
Graph 22 indicates that in grade 4 the Brava surpassed the White by 9 scores, but in grade 9 the White group ranked 17 equated scores above the Brava group. The White group showed an improvement of 26 more equated scores in Spelling than did the Brava group during their school career. The White group shows a fairly constant improvement and is never fewer than 3 scores above the average equated score; while the Brava progress is irregular, being 16 equated scores above in grade 4 and 2 equated scores below in grade 9. The Brava shows the greatest achievement between grades 6 and 7 (9 scores) and the least between grades 4 and 5 (-2 scores), as compared to the White group which makes the greatest progress in grade 5 (14 scores) and the least in grade 7 (4 scores).





GRAPH 23

THE WHITE AND BRAVA RESULTS OF THE STANFORD ACHIEVEMENT  
TEST IN SOCIAL STUDIES IN THE PUBLIC SCHOOLS OF MARION,  
MASSACHUSETTS MAY, 1940.

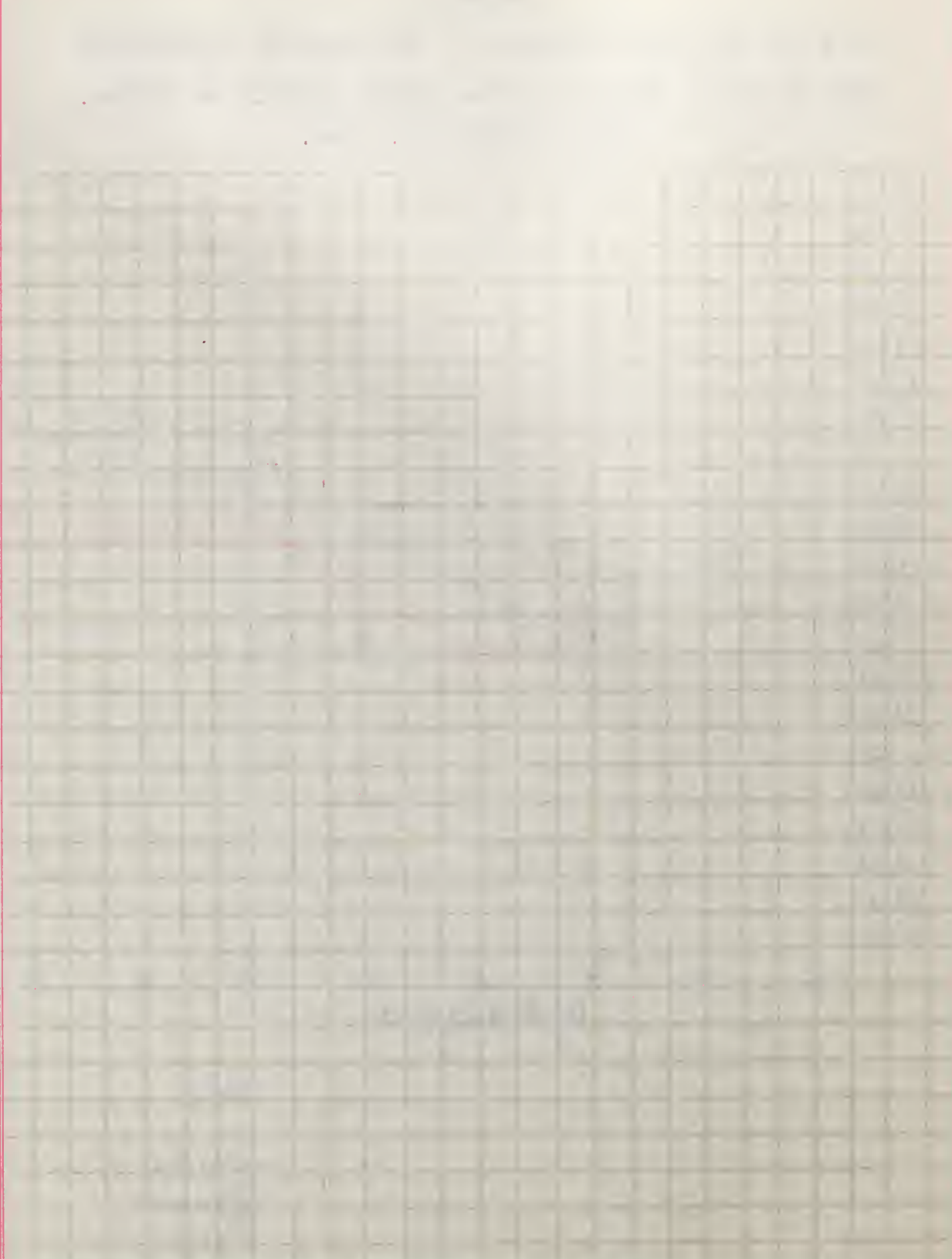


Key

Whites —

Bravas —

Norm —



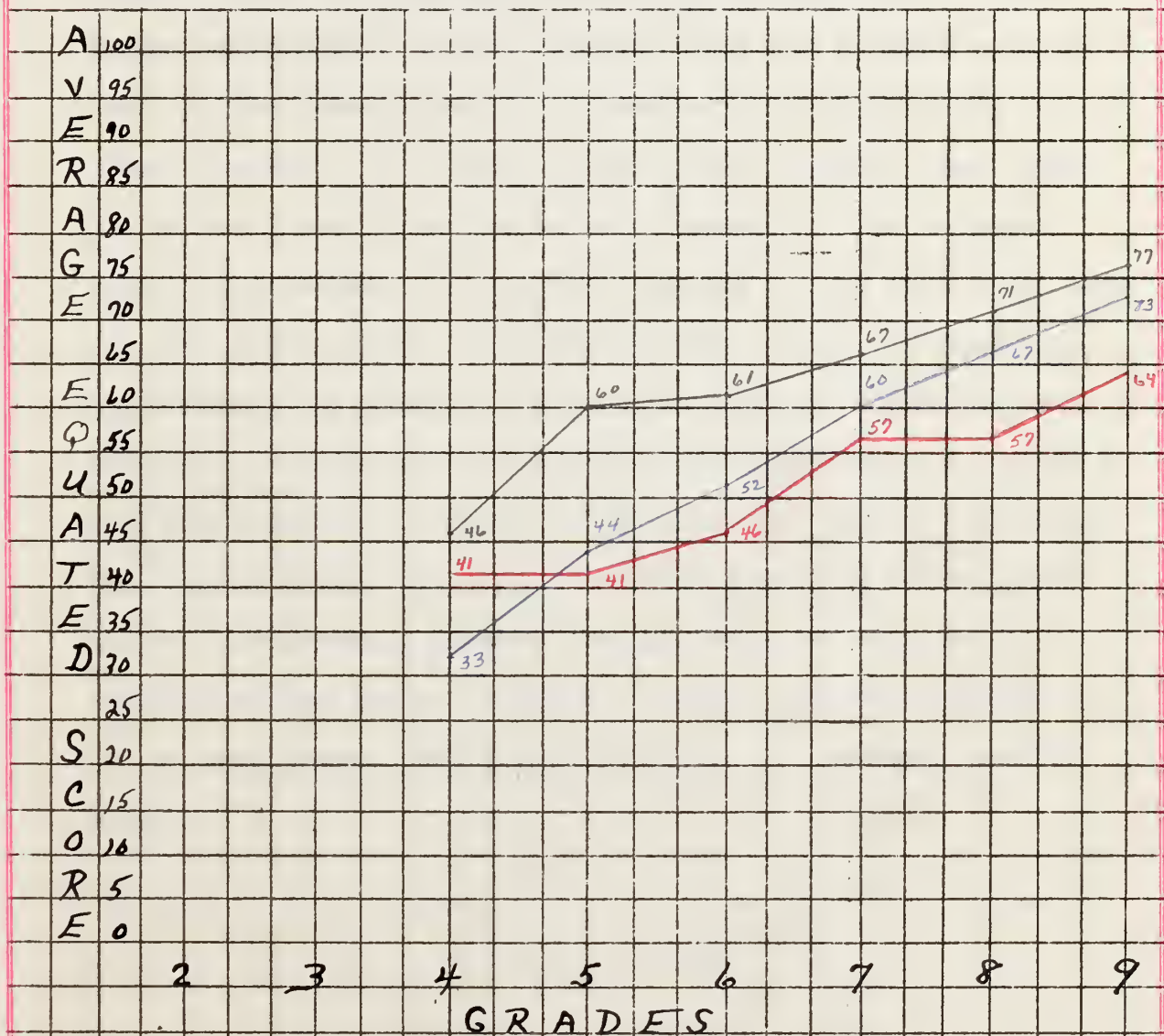
Graph 23 indicates that in grade 4 there is no difference between the White and the Brava equated score, but that in grade 9 there is a difference of 19 scores. The White achievement is 19 scores greater than the achievement of the Brava group in the Social Studies (history and geography). The White group shows the greatest achievement in grade 7 (15 scores) and none in grade 6, where as a matter of fact there is a decrease, 7 scores; while the Bravas show the greatest progress in grade 7 (10 scores) and none in grade 5 with a loss of 3 scores. The progress of both groups is irregular. The only time the Brava is above the average equated score is in grade 4 when they are 4 scores above. In grade 9, he makes the poorest showing, being 12 scores below the average equated score. In grades 8 and 9 the White group <sup>shows</sup> normal progress, but the Brava reaches a plateau in his learning.





GRAPH 24

THE WHITE AND BRAVA RESULTS OF THE STANFORD ACHIEVEMENT  
TEST IN ELEMENTARY SCIENCE IN THE PUBLIC SCHOOLS OF MARION,  
MASSACHUSETTS MAY, 1940.



Key

Whites —  
Bravas —  
Norm. —



Graph 24 indicates that in grade 4 both the White and the Brava groups were above the average equated score and that there is a difference of 5 equated scores as compared to a difference of 13 scores in grade 9. The White achievement is 1.8 greater than the average achievement of the Brava group in Elementary Science during their school career. The White group shows progress each year, while the Brava progress is not constant. The average annual achievement of the White group is 1.6 more than that for the Brava group. The White group shows the greatest achievement in grade 5 (14 scores) and the least in grade 6 (1 score), while the Brava shows no improvement in grade 8 and the greatest in grade 7 (11 scores). At no time after the fourth grade has been completed does the Brava group attain the average equated score, being as many as 9 equated scores below in grade 9; while the White group is at no time fewer than 4 scores above the average equated score.





## CHAPTER V

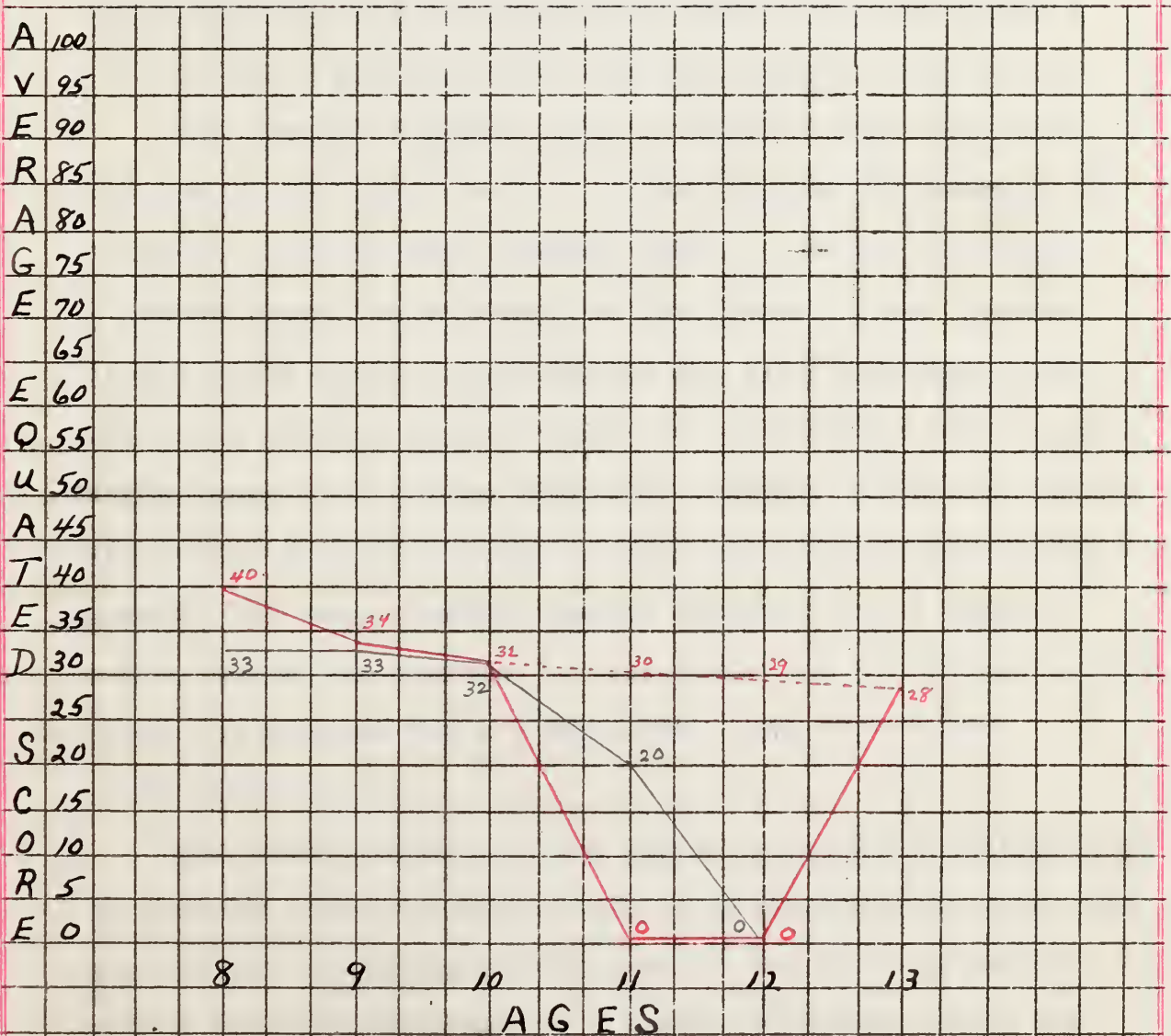
### CHRONOLOGICAL AGES AND THE STANFORD ACHIEVEMENT TESTS

Teachers have learned through the repeated use of tests something of the significance of age and grade equivalents, the result of tests scores, and these provide meaningful points of reference for guidance in the understanding of test results. In order to determine which pupils were at the average grade level for their age, distributions were made of the chronological ages of all pupils in grades 3, 6 and 9 respectively. In classifying the members of each age group, the following plan was utilized: anyone whose chronological age happened to be between 7 years, 6 months and 8 years, 5 months has been classified as 8 years. The same plan has been used in comparing the average equated grade score of the Marion school children with the standard equated grade scores as established by the Stanford Achievement Test. The average equated scores as attained by both the Whites and Bravas in each age and grade group have been computed so that they may be compared with the standard equated scores as established by the Stanford Achievement Test for the grades which have been considered.



GRAPH 25

THE WHITE AND BRAVA RESULTS (AVERAGED) IN THE STANFORD  
ACHIEVEMENT TEST ACCORDING TO CHRONOLOGICAL AGES IN GRADES 3  
IN THE PUBLIC SCHOOLS OF MARION, MASSACHUSETTS MAY, 1940.



Key

Whites—

Bravas—





Graph 25 indicates that there is a range of 5 years (8--13) in the chronological ages of the members of grades 3. The White range is from 8-11 years as compared to 8-13 for the Brava group. The standard average age equivalent as established by the Stanford Achievement Test for grade 3 is 9 years, 1 month, and the average equated score is 38.

The average equated score of those 8 year old White members of the class is 33, 5 scores below the average, as compared to an average equated score of 40 for the Bravas, 2 scores above the average for the grade. Those members of the class whose chronological age is 9 attained scores below the average equated score for the grade; that is, the White group is 5 scores below the average, while the Bravas are 4 scores below. In the 10 year old group, both groups secured the same average equated score of 32, 6 equated scores below the average for the grade but 19 equated scores below the average for a person with that particular chronological age.

The White members of the class 11 years old established an average equated score of 20, 18 equated scores below the average for the grade or the equated score for a person with a chronological age of 7 years, 5 months, while the Brava group was not represented in this age grade group. Chronologically speaking, grades 3 were without members 12 years old. The Brava members of the group 13 years old attained an average equated score of 28, 10 equated



scores below the average equated score of a person with a chronological age of 8 years, 3 months, while the White group lacked representation.

The average equated score for all the Brava members of the grade is 22, 16 equated scores below normal, as compared to the average equated score of all the Whites 30, 8 scores below the standard for the grade.

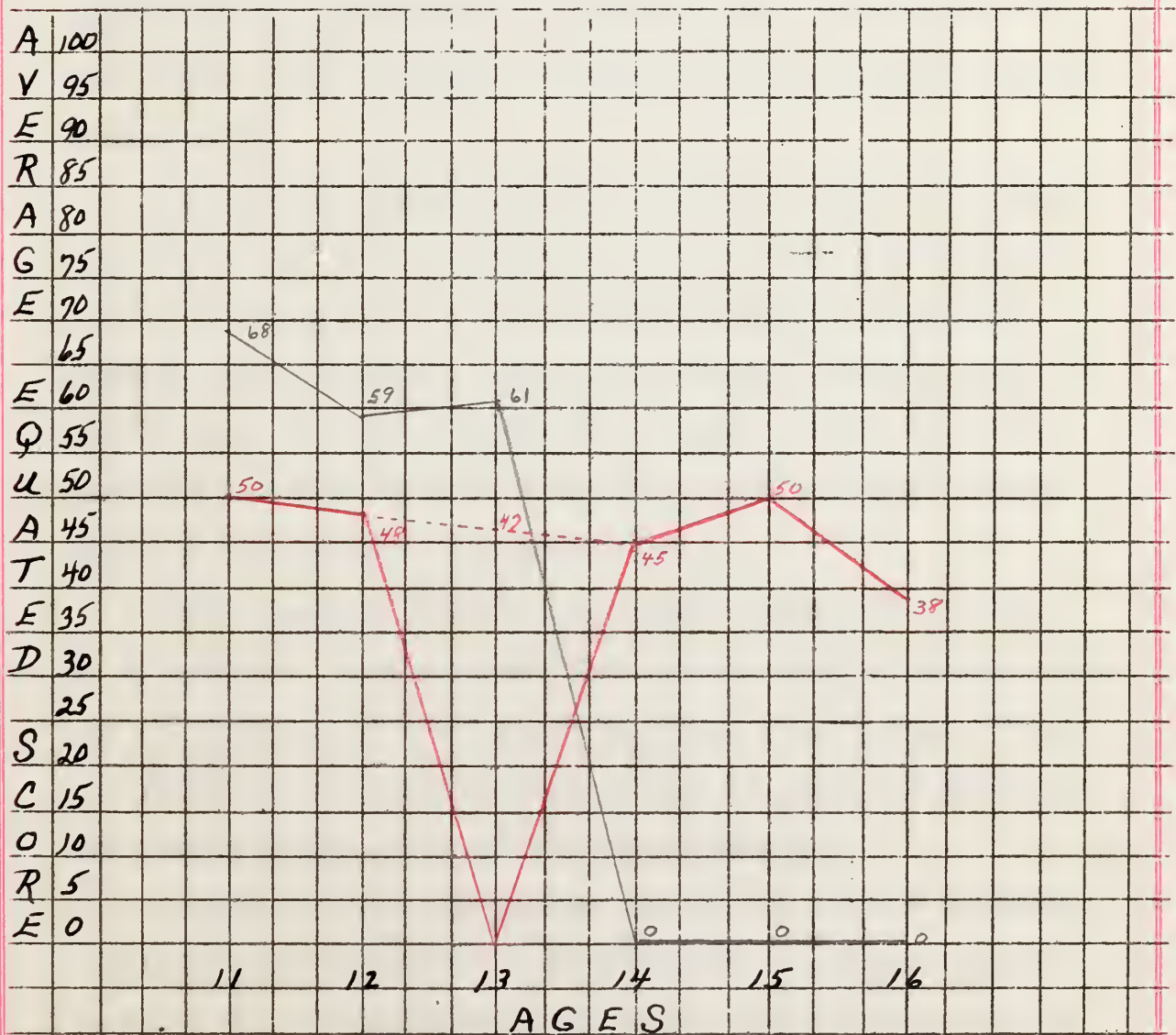
Thus, the average equated score of the Brava is twice as far below the standard average equated score as is the average equated score of the White.



in fact, the only way to ensure that the system  
is not over-reliant on a single source of information  
is to ensure that the system is able to access  
multiple sources of information. This is why it is  
important to ensure that the system is able to  
access multiple sources of information. This is why  
it is important to ensure that the system is able  
to access multiple sources of information. This is  
why it is important to ensure that the system is  
able to access multiple sources of information.

GRAPH 26

THE WHITE AND BRAVA RESULTS (AVERAGED) IN THE STANFORD  
ACHIEVEMENT TEST ACCORDING TO CHRONOLOGICAL AGES IN GRADES 6  
IN THE PUBLIC SCHOOLS OF MARION, MASSACHUSETTS MAY, 1940.



Key

Whites —

Bravas —



Graph 26 indicates that there is a range of 5 years (11-16) in the chronological ages of the members of grades 6. The White range is from 11-13 years as compared to 11-16 for the Brava group. The standard average age equivalent as established by the Stanford Achievement Test for grades 6 is 11 years, 10 months, and the average equated score is 78.

The average equated score of those 11 year old White members of the class is 68, 10 scores below the average equated score of 50 for the Brava, 28 scores below the average for the grade. Thus, the average equated score of the 11 year old Brava is nearly 3 times as far below the standard average equated score as is the average equated score of the Whites of the same age.

Those members of the class whose chronological age is 12 attained scores below the average equated score; that is, the White group is 18 scores below the average, while the Brava is 30 scores below; or the 12 year old Bravas are nearly twice as far below the standard.

In the 13 year old group, the Bravas lacked representation, while the White group attained an average equated score of 61, 17 equated scores below the average for the grade, and 24 equated scores below the average for a person with that particular chronological age.

Those members of the Brava group 14 years old established an average equated score of 45, 33 scores below



The first part of the paper discusses the importance of the study and the objectives of the research. It also provides a brief overview of the methodology used in the study.

The second part of the paper presents the results of the study. It discusses the findings of the research and compares them with the existing literature. The results show that there is a significant difference between the two groups.

The third part of the paper discusses the implications of the study. It highlights the practical applications of the findings and suggests areas for further research. The study has important implications for the field of research.

The fourth part of the paper concludes the study. It summarizes the main findings and reiterates the importance of the research. The study has provided valuable insights into the topic and has contributed to the body of knowledge in the field.

The study was conducted in a systematic and rigorous manner, ensuring the reliability and validity of the findings.

the average. The 15 year old Brava group attained an average score of 50, 28 scores below the average; while the 16 year old members of the same group attained an average of 38 scores, 40 scores below the average equated score for the grade.

The average equated score for all the Brava members of the grade is 39, 39 equated scores below normal, as compared to the average equated score established by the White members of the grade 63, which is 15 scores below the standard for the grade. In other words, the average equated score as established by the Brava group is 2.6 times farther below the standard average equated score.

1. The first part of the report is a general introduction to the subject of the study. It discusses the importance of the research and the objectives of the study. It also provides a brief overview of the methodology used in the study.

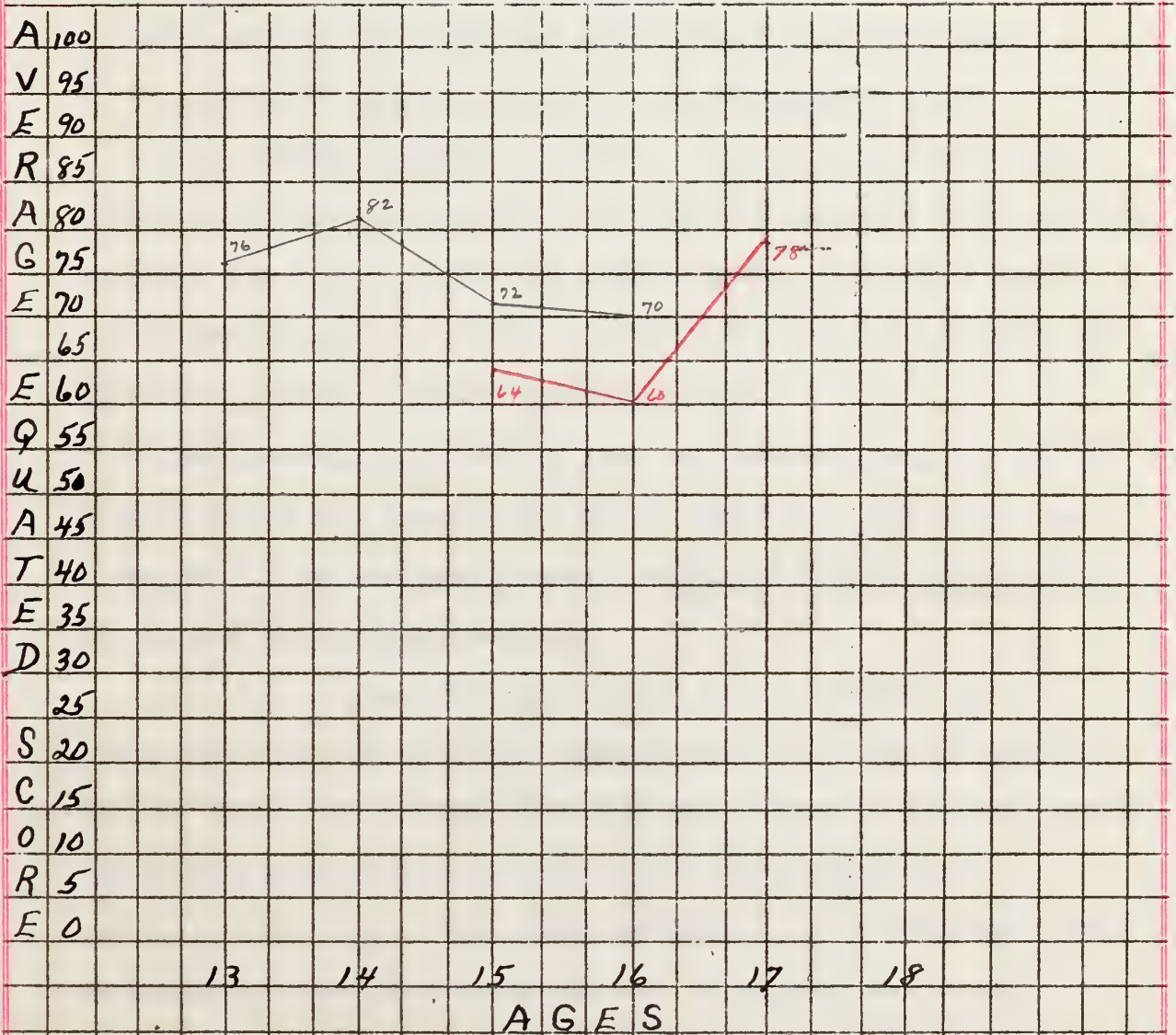
2. The second part of the report is a detailed description of the methodology used in the study. It discusses the data collection methods, the data analysis methods, and the results of the study. It also provides a brief overview of the conclusions drawn from the study.

3. The third part of the report is a discussion of the results of the study. It discusses the findings of the study and the implications of the findings. It also provides a brief overview of the conclusions drawn from the study.

4. The fourth part of the report is a conclusion. It summarizes the findings of the study and the implications of the findings. It also provides a brief overview of the conclusions drawn from the study.

GRAPH 27

THE WHITE AND BRAVA RESULTS (AVERAGED) IN THE STANFORD  
ACHIEVEMENT TEST ACCORDING TO CHRONOLOGICAL AGES IN GRADE 9  
IN THE PUBLIC SCHOOLS OF MARION, MASSACHUSETTS MAY, 1940.



Key

Whites —

Bravas —





Graph 27 indicates that there is a range of 5 years (13-17) in the chronological ages of the members of grade 9. The White range is from 13-16 years as compared to 15-17 for the Brava group. The standard age equivalent as established by the Stanford Achievement Test for grade 9 is 15 years, 4 months, and the average equated score is 98.

The average equated score of those 13 year old White members of the class is 76, 22 scores below the average; the average for the 14 year old group is 82, 16 scores below the average equated score. In both the 13 and 14 year age groups the Brava lacked representation.

The average for the 15 year old White group is 72, 26 scores below the average as established for the grade as compared to an average equated score of 64 for the Bravas, 35 scores below the average.

In the 16 year old group, the White members of the class attained an average equated score of 70, 28 equated scores below the average for the grade and 33 equated scores below the average for a person with that particular chronological age. The Brava members of the same age group attained an average of 60 scores, 38 scores below the grade average and 43 equated scores below their chronological age group. The White group lacks representation in the 17 age grade group but the Brava group established an average of 78 scores, 20 equated scores below the average for the grade.



The average equated score for all the Brava members of the grade is 61, 37 equated scores below the standard equated score as compared to the average equated score established by the White members of the grade 75, which is 23 scores below the standard for the grade.

In other words, the average equated score as established by the Brava group is 1.6 times farther below the standard average equated score.



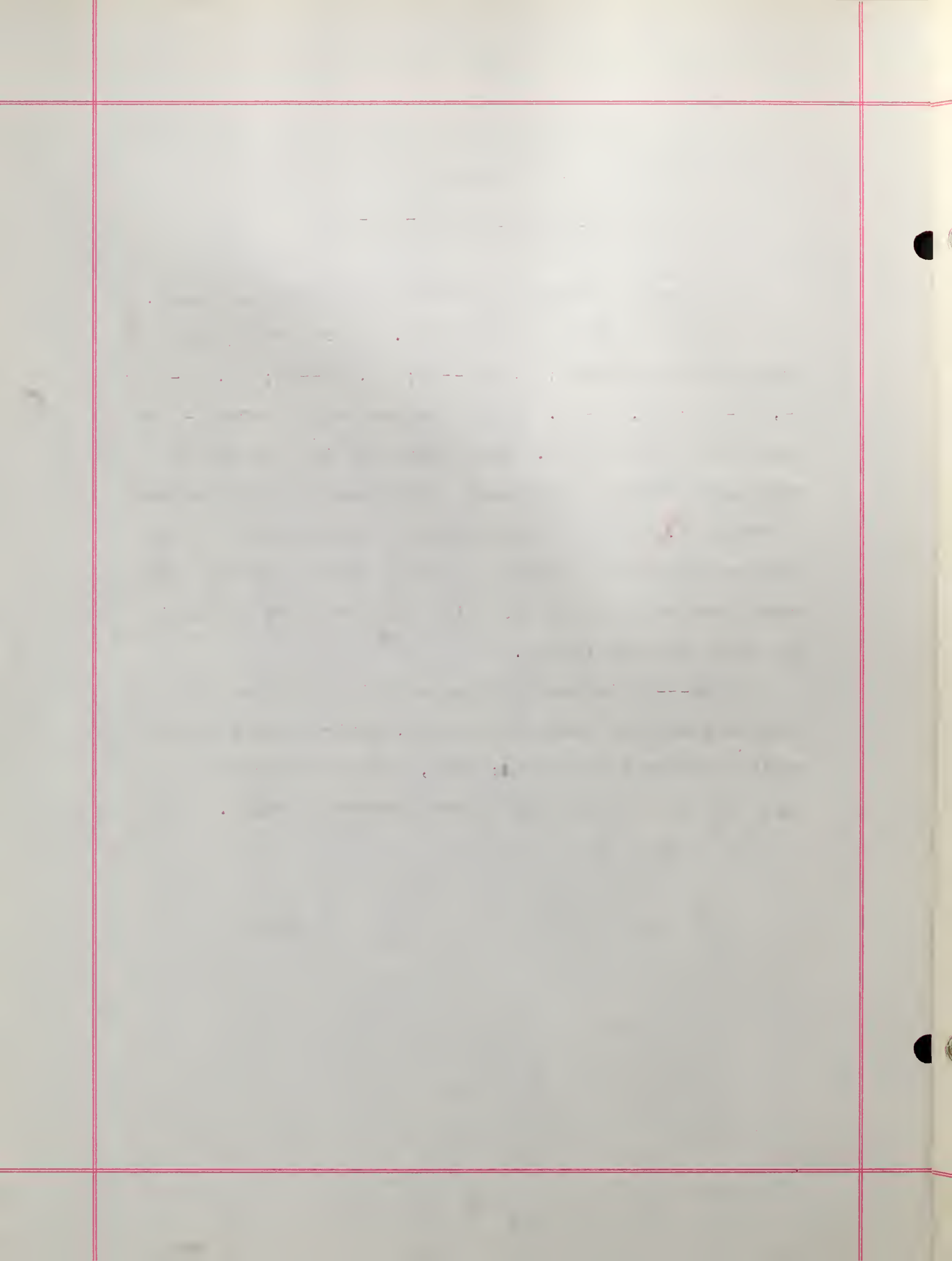


## CHAPTER VI

### MARKS IN GRADES 3 - 6 - 9

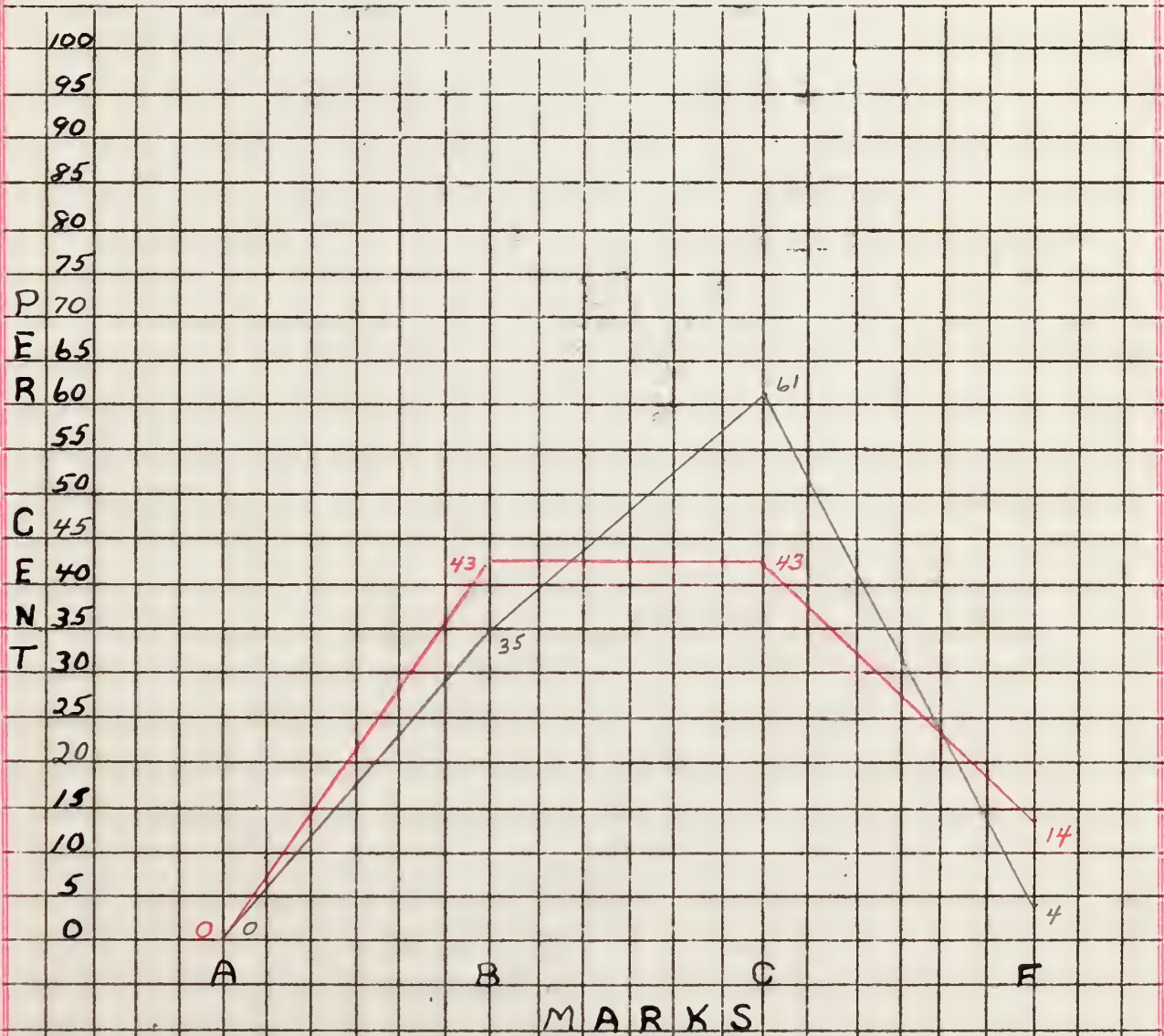
It is well to note at this time the marking system, as it exists in the Marion Schools. There are 5 possible grades to be attained: A, 100--90; B, 89--80; C, 79--70; C-, 69--67; F, 66--0. In the comparison of marks C- has been classified as a C. The marks used in this survey were taken from the permanent record cards of the members of grades 3, 6 and 9 respectively as of the school year 1940 and represent a typical summary of the average final marks received by both the White and the Brava groups in the major subject fields.

(Note---It is essential to keep in mind the fact that as the Brava group progresses, their numbers as to grade enrollment decrease; thus, the statistics in the upper grades are based on a fewer number of cases.)



GRAPH 27 (A)

THE PER CENT OF A'S, B'S, C'S, AND F'S GIVEN TO THE WHITE  
AND BRAVA PUPILS IN READING IN GRADES 3 OF THE PUBLIC SCHOOLS  
OF MARION, MASSACHUSETTS 1940.

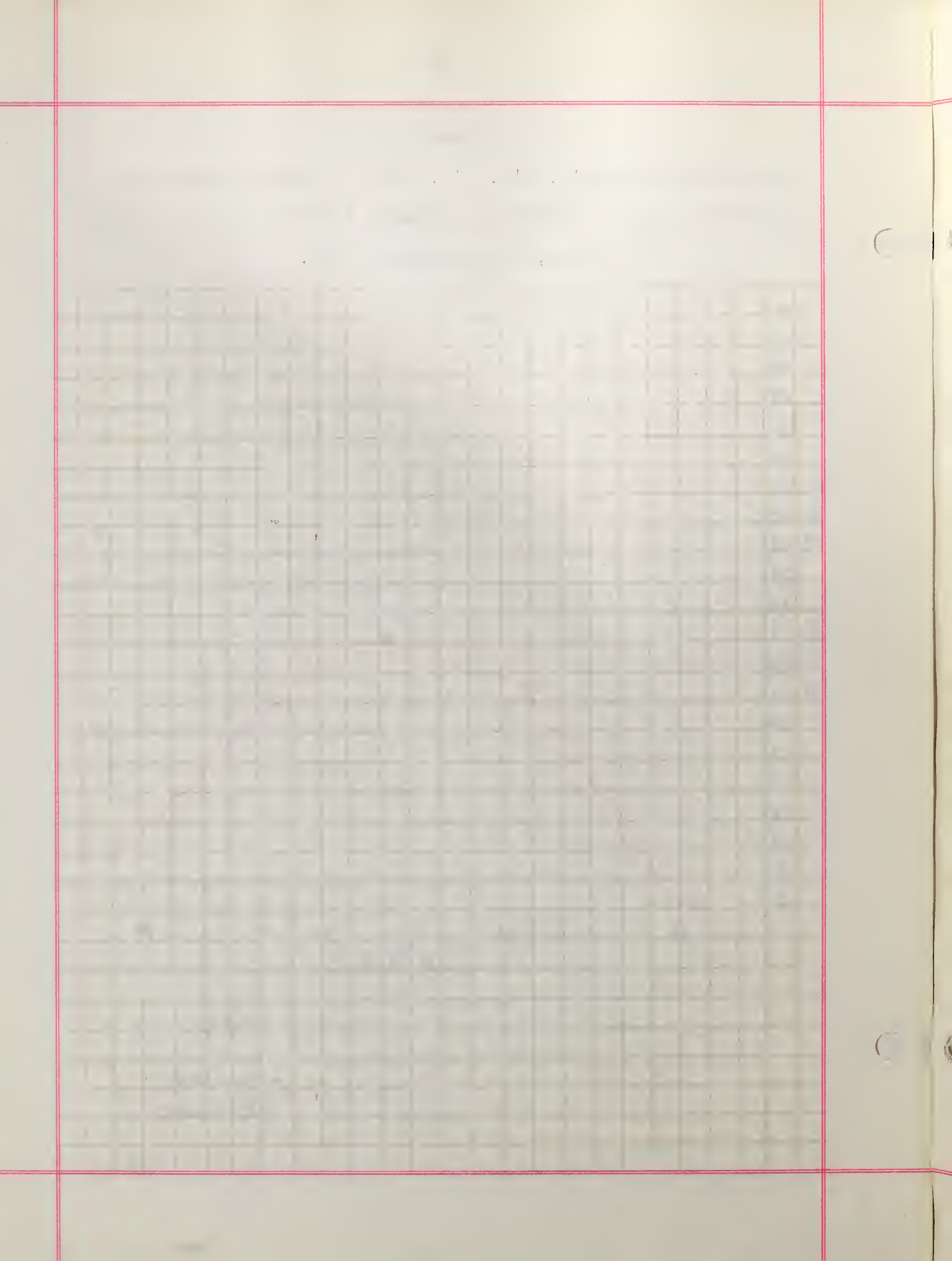


Key

Whites —

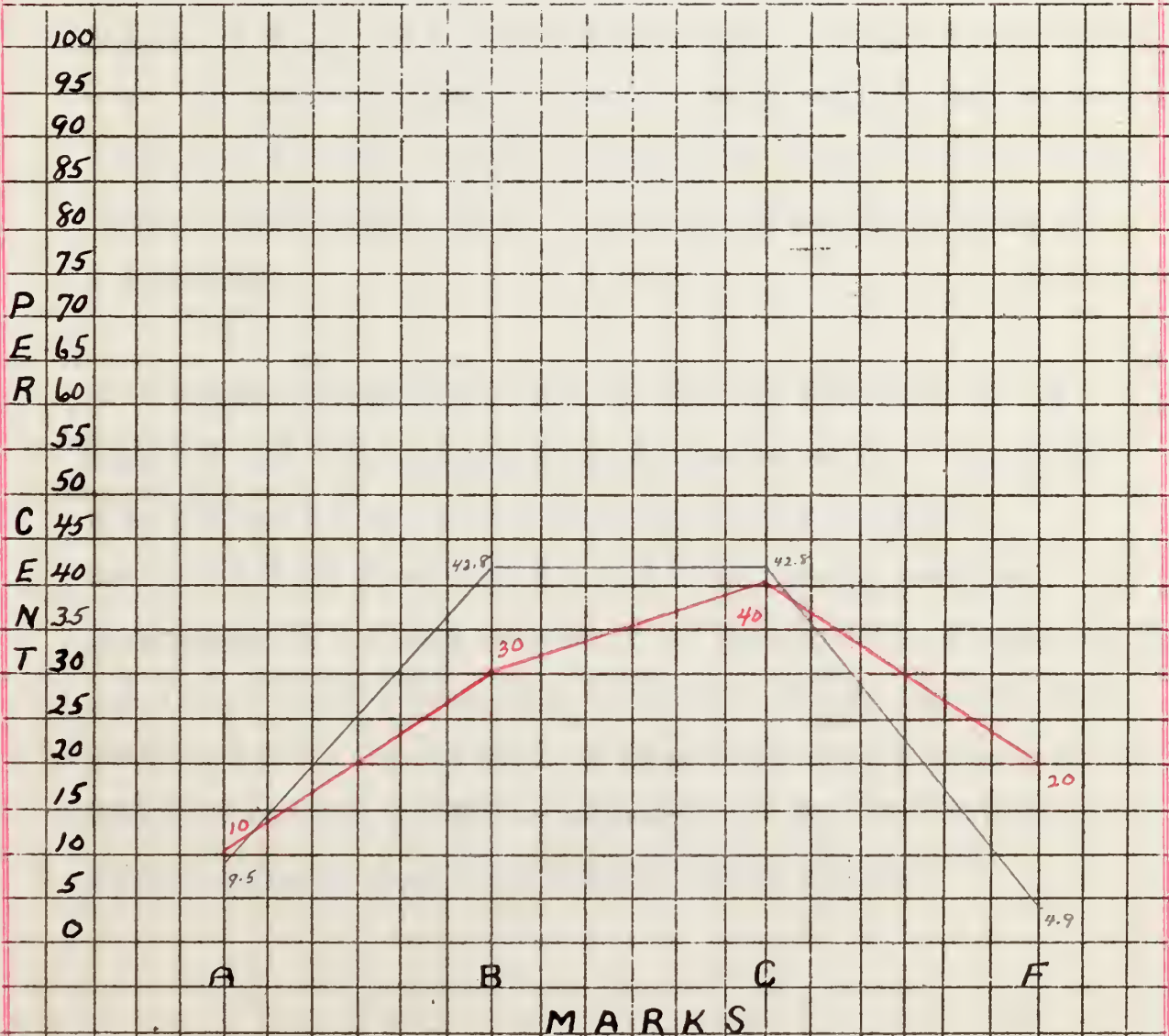
Bravas —





GRAPH 28

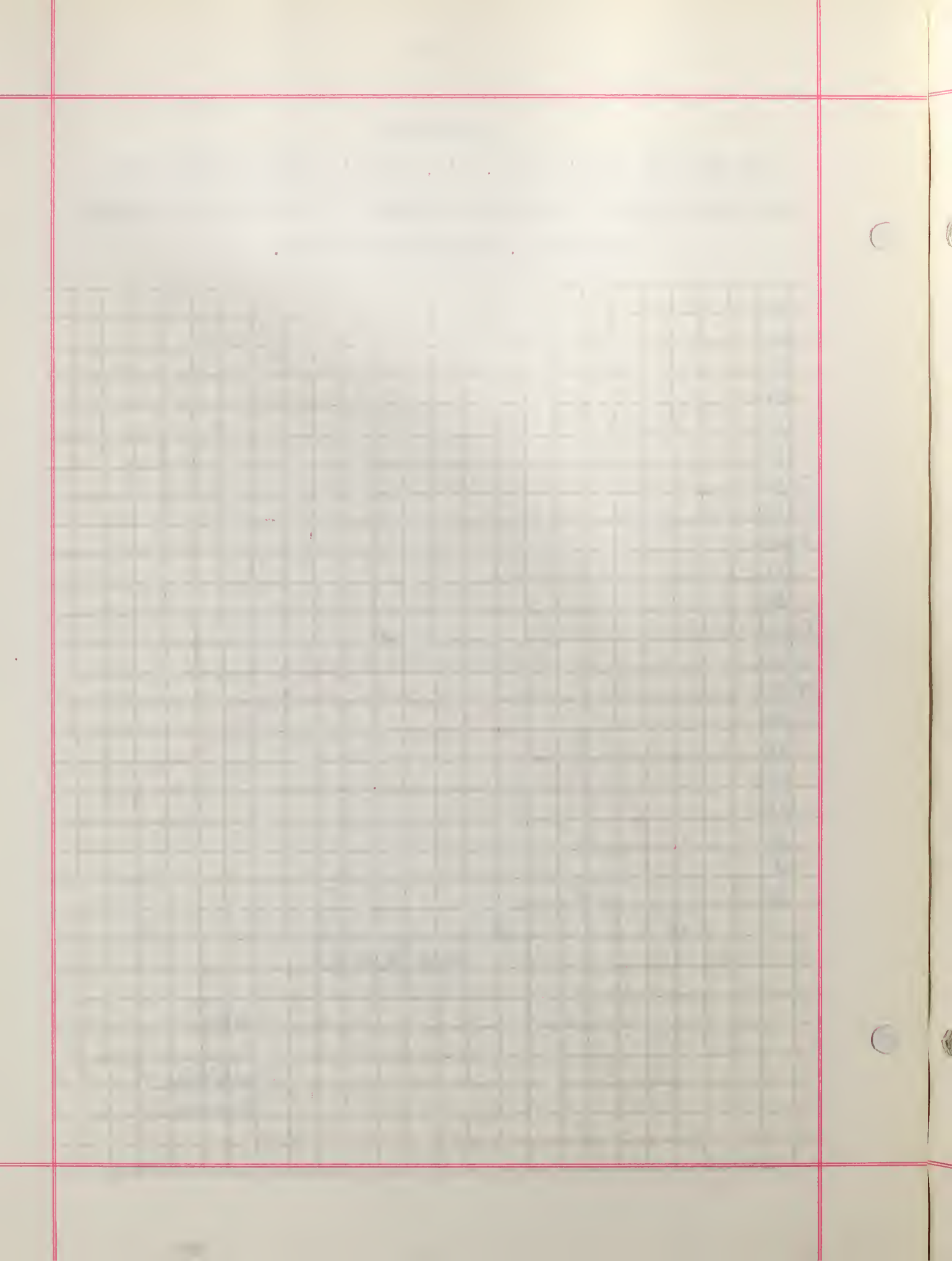
THE PER CENT OF A'S, B'S, C'S, AND F'S GIVEN TO THE WHITE  
AND BRAVA PUPILS IN READING IN GRADES 6 OF THE PUBLIC SCHOOLS  
OF MARION, MASSACHUSETTS 1940.



Key

Whites —

Bravas —





Graph 27a indicates that 43 % or approximately  $\frac{2}{5}$  of the Brava group received C's, while 61 % or approximately  $\frac{3}{5}$  of the Whites received the same mark. Ten per cent (10%) more of the Whites received either B's or C's, Whites 96 %-Bravas 86 %, and 10 % more Bravas failed, Bravas 14 %--Whites 4 %. In the C-F group we find 8 % more Whites, Whites 65 %-Bravas 57 %, while in the A-B group we find 8 % more Bravas, Bravas 43 %--Whites 35%. In neither group do we find any A students.

Graph 28 indicates that the Whites received 12.3 % more A's and B's, Whites 52.3 %--Bravas 40 %; .5 % fewer A's, Whites 9.5 %--Bravas 10 % and 12.8 % more B's, Whites 42.8 %--Bravas 30 %. The Brava group received approximately 4 times as many F's, Bravas 20 %--Whites 4.9 %, and 12.3 % more Bravas were in the C-F group, Bravas 60 %--Whites 47.7 %. It is well to note that 95.1 % of the Whites received passing grades as compared to 80 % for the Bravas, which indicates that 15.1 % more Bravas failed.





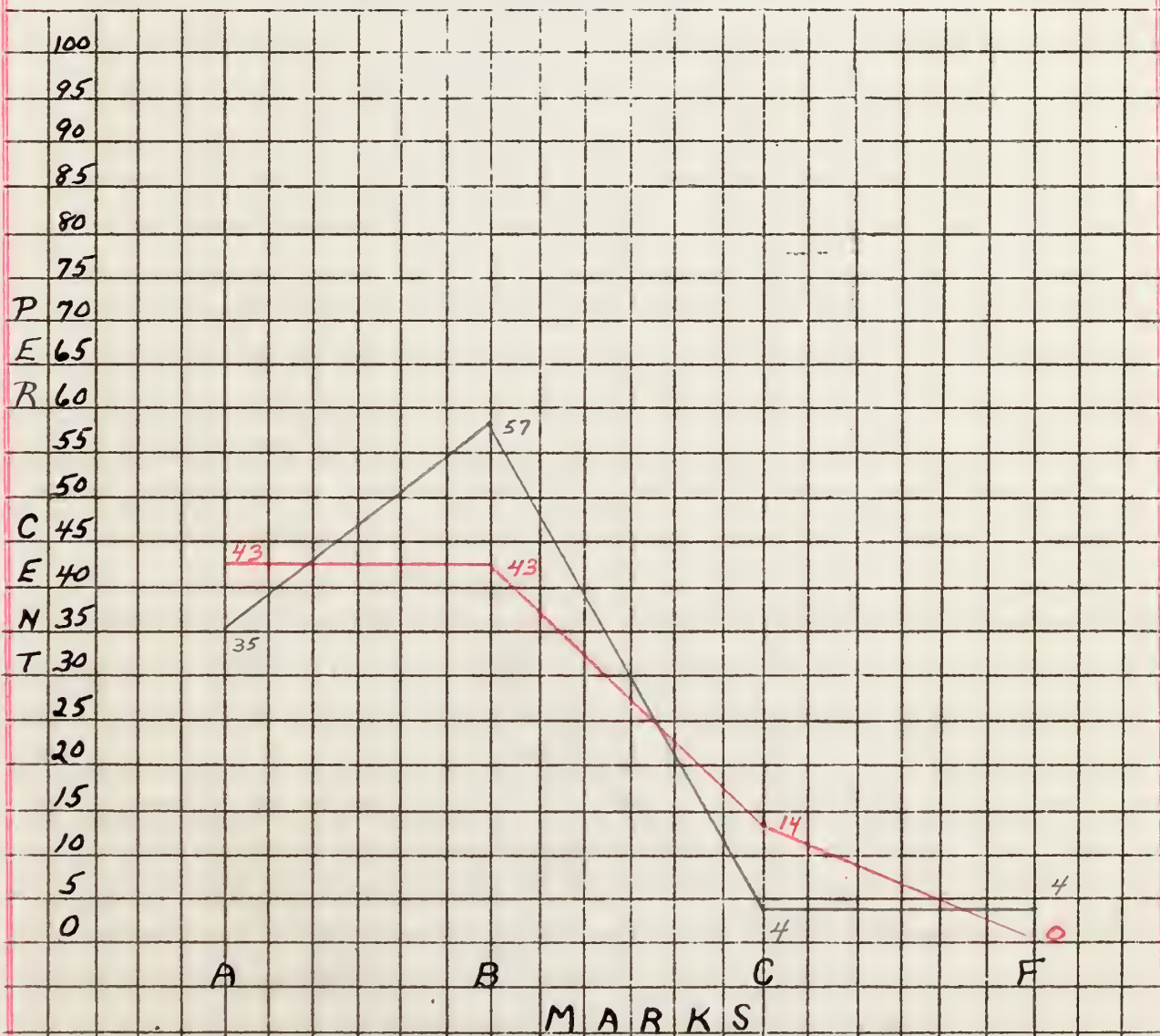
### A Summary On Reading Marks.

An analysis of the Reading marks indicates that the Brava has difficulty in mastering the subject. In grades 3, 14 % failed as compared to 20 % in grades 6; 6 % more failed in grades 6 than failed in grades 3. In the third grades, 43 % got C's while in grades 6, 40 % attained the same mark. Forty-three per cent (43 %) got B's in grades 3 as compared to 30 % in grades 6, while 10 % of the Brava group received A's in grades 6. No one in either the White or the Brava group received the mark of A in grades 3. In grades 3, 10% more Bravas failed than did Whites, Bravas 14 %--Whites 4 %, while in grades 6, 15.1 % more Bravas received a similar mark, Bravas 20 %--Whites 4.9 %, than did the White group.



GRAPH 29

THE PER CENT OF A'S, B'S, C'S, AND F'S GIVEN TO THE WHITE  
AND BRAVA PUPILS IN SPELLING IN GRADES 3 OF THE PUBLIC SCHOOLS  
OF MARION, MASSACHUSETTS 1940.



Key

Whites —

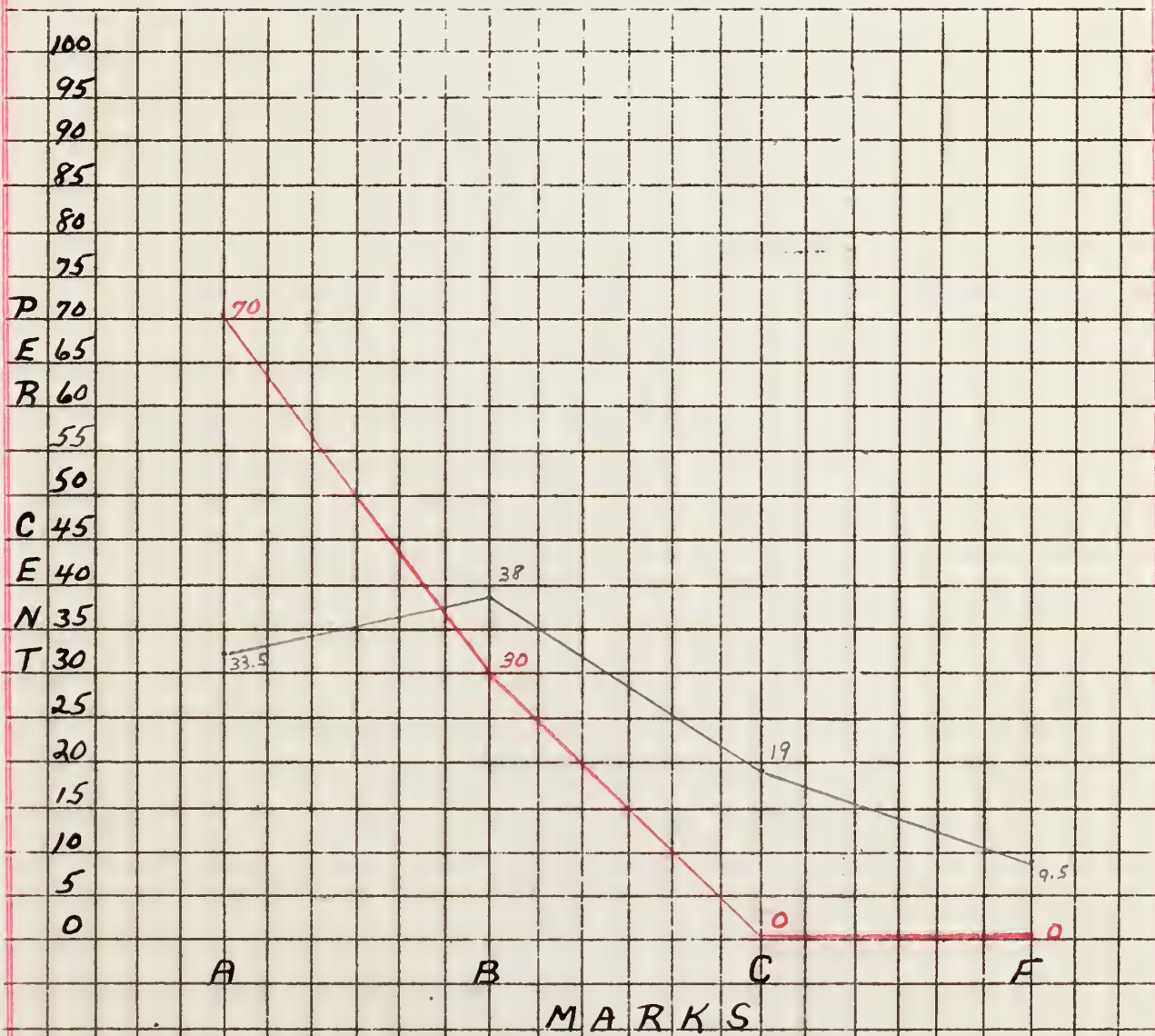
Bravas —





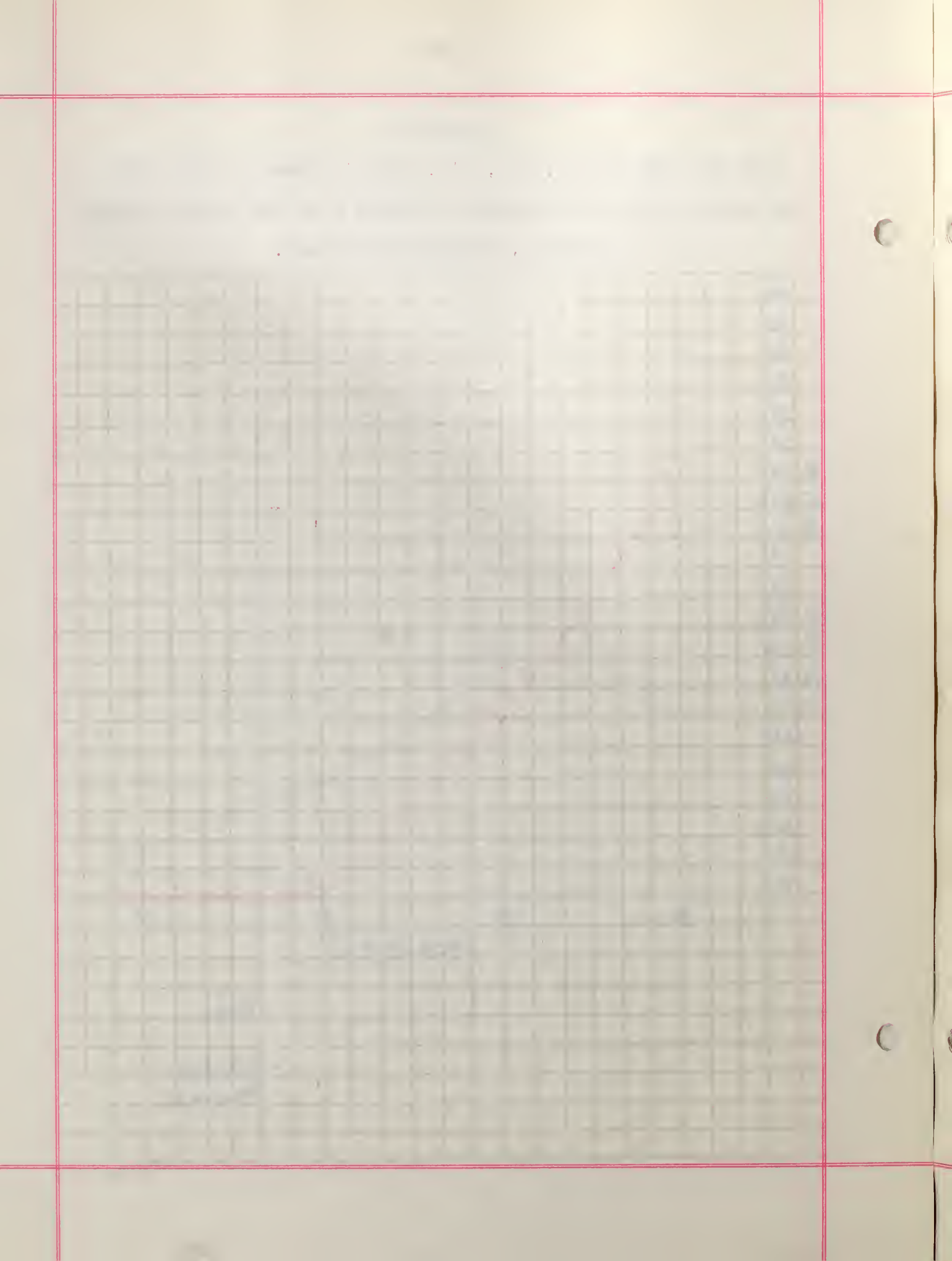
GRAPH 30

THE PER CENT OF A'S, B'S, C'S, AND F'S GIVEN TO THE WHITE  
AND BRAVA PUPILS IN SPELLING IN GRADES 6 OF THE PUBLIC SCHOOLS  
OF MARION, MASSACHUSETTS 1940.



Key

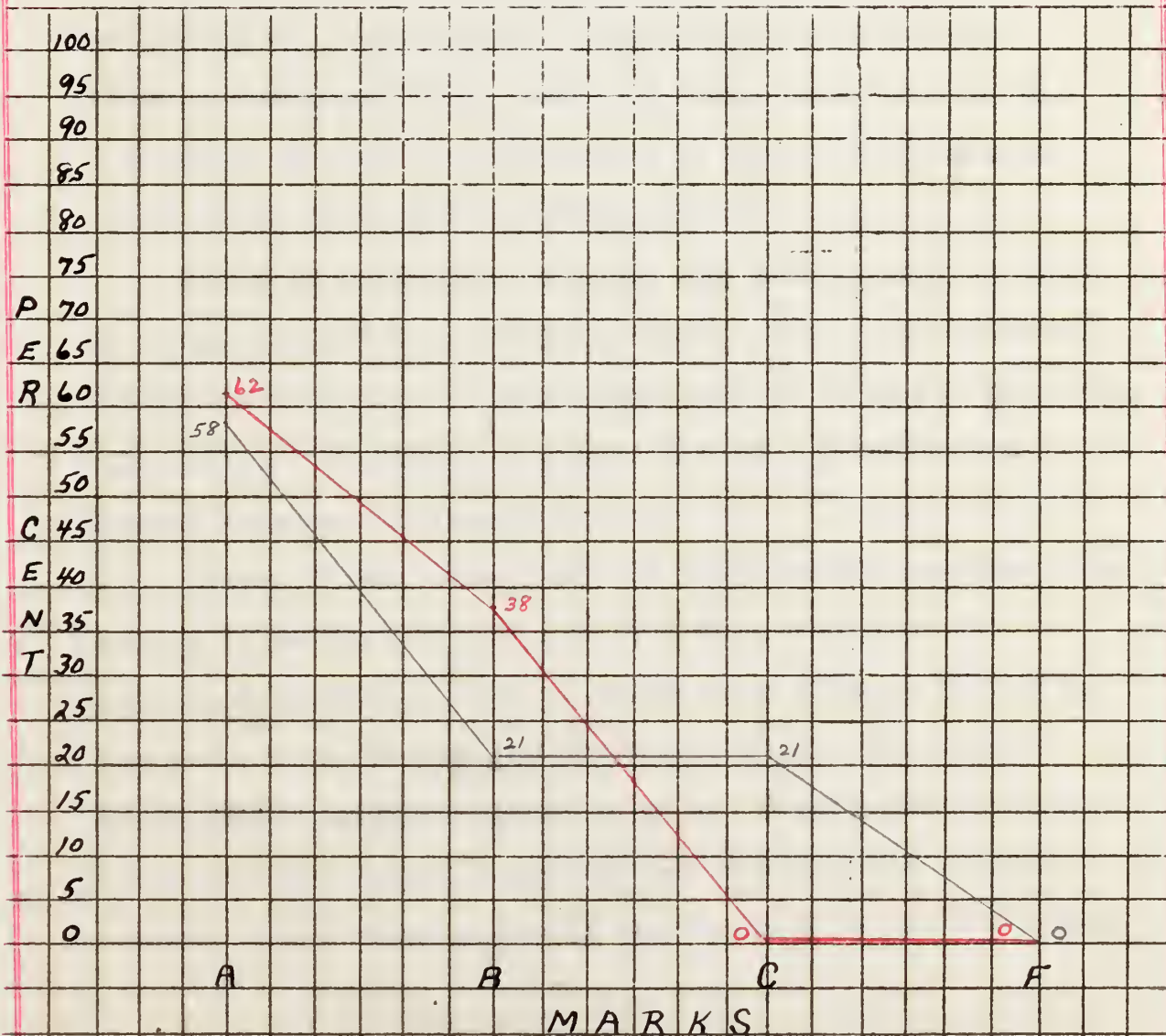
Whites —  
Bravas —





GRAPH 31

THE PER CENT OF A'S, B'S, C'S, AND F'S GIVEN TO THE WHITE  
AND BRAVA PUPILS IN SPELLING IN GRADE 9 OF THE PUBLIC SCHOOLS  
OF MARION, MASSACHUSETTS 1940.

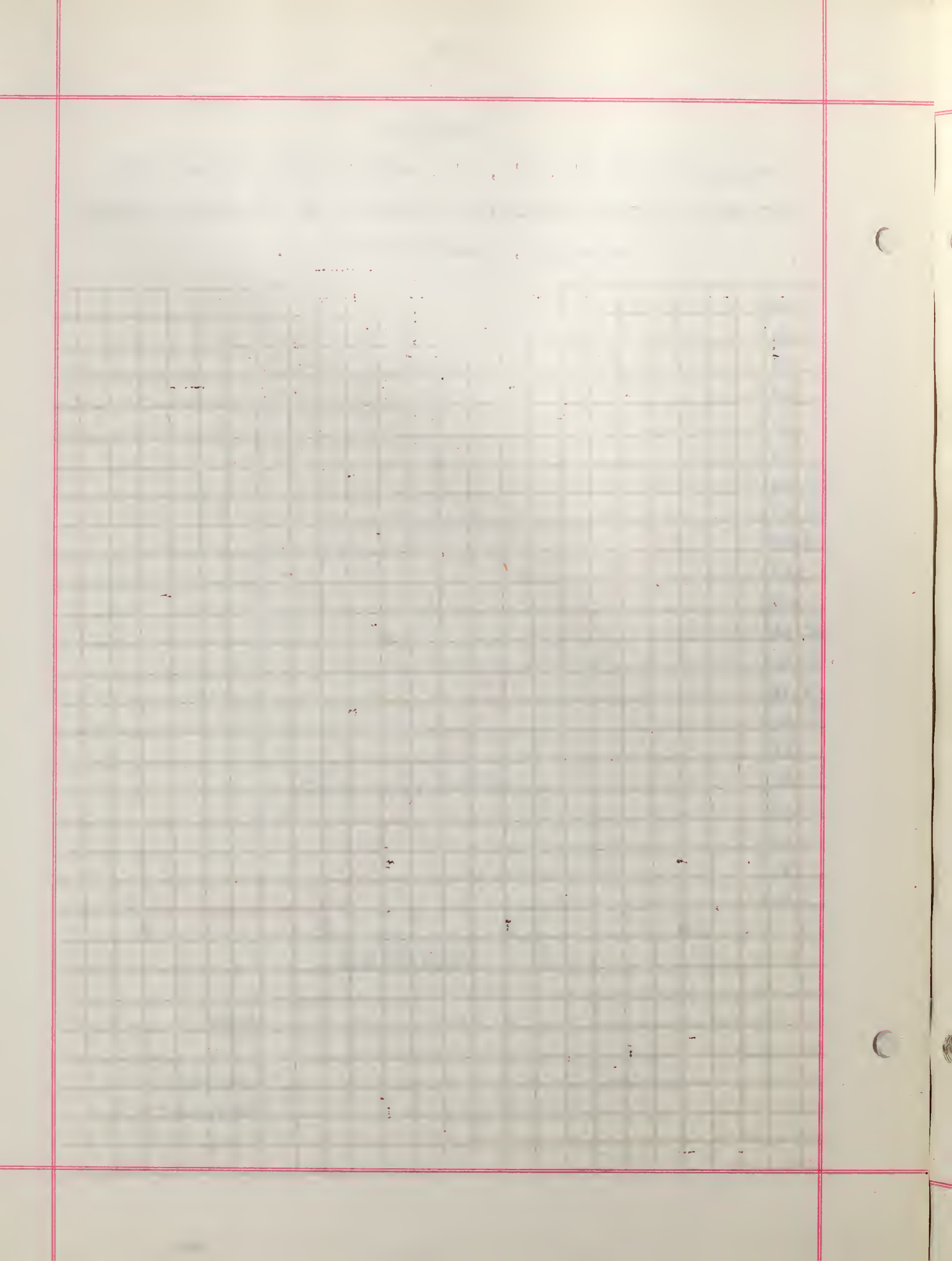


Key

Whites —

Bravas —





Graph 29 indicates that approximately 8 % more Bravas received A's, Bravas 43 %--Whites 35 %. Fourteen per cent (14 %) more Whites received B's, Whites 57 %--Bravas 43 %, and 6 % more Whites received either A's or B's, Whites 92 % Bravas 86 %. Although 10 % more Bravas received C's, White 4 %--Bravas 14 %, only 6 % more Bravas are in the C-F group, Bravas 14 %--Whites 8 %, due to the fact that the F group lacks Brava representation.

Graph 30 indicates that all the Bravas were in the A-B group, 28.5 % more Bravas received A's or B's, Bravas 100 %--Whites 71.5. Twenty-eight and five-tenths per cent (28.5 %) of the Whites received C's or F's while the Bravas were not represented.

Graph 31 indicates that 4 % more Bravas received A's, Bravas 62 %--Whites 58 %, and 17 % more received B's, Bravas 38 %--Whites 21 %, or there were 21% more Bravas in the A-B group, Bravas 100 %--Whites 79 %. The entire Brava group received either A or B. Twenty-one per cent (21 %) of the Whites received C's, while not a single member of the Brava group is represented in the C-F group.



### A Summary On Spelling Marks.

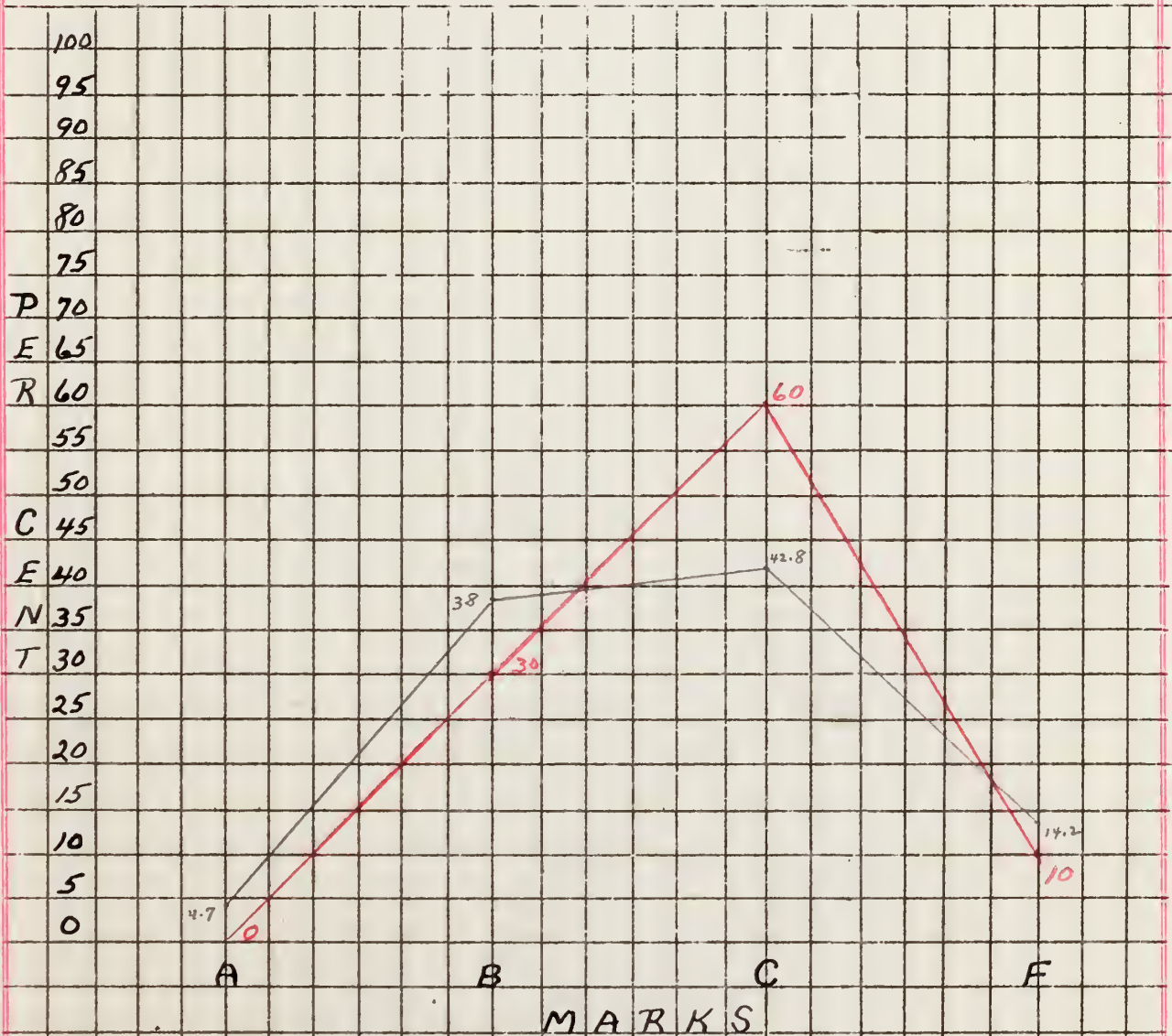
Spelling is a strong subject for the Brava group. There is gradual improvement as the preceeding graphs indicate, In grades 3, 14 % received a mark of C but in both grades 6 and 9 the lowest mark attained was a B. The number of A's received further supports the above statement: in grades 3, 43 %; grades 6, 70 % and in grade 9, 62 %. In grade 9 there is 100% Brava representation in the A-B group as compared to only 86 % in grades 3, an improvement of 14 % in 6 grades. Likewise, in grade 9 the Brava group lacks representation in the C-F group as compared to 14 % in grades 3, a decrease of 14 % in 6 grades.





GRAPH 32

THE PER CENT OF A'S, B'S, C'S, AND F'S GIVEN TO THE WHITE  
AND BRAVA PUPILS IN LANGUAGE IN GRADES 6 OF THE PUBLIC SCHOOLS  
OF MARION, MASSACHUSETTS 1940.



Key

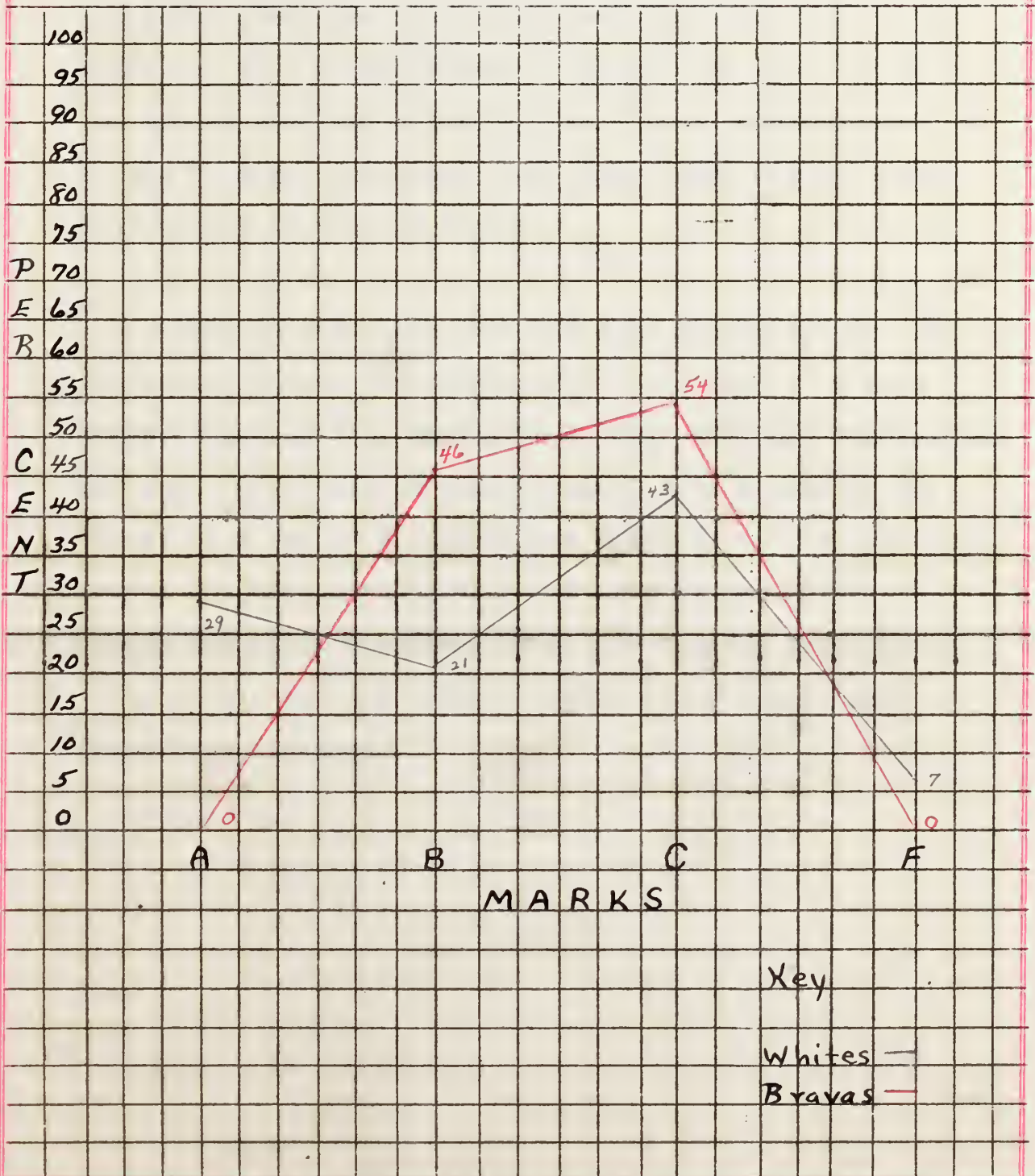
Whites —  
Bravas —





## GRAPH 33

THE PER CENT OF A'S, B'S, C'S, AND F'S GIVEN TO THE WHITE  
AND BRAVA PUPILS IN LANGUAGE IN GRADE 9 OF THE PUBLIC SCHOOLS  
OF MARION, MASSACHUSETTS 1940.





1. The first part of the paper is devoted to the study of the properties of the function  $f(x)$  defined by the equation

| $x$ |     | $f(x)$ |
|-----|-----|--------|
| 0   | 1   | 1      |
| 1   | 2   | 2      |
| 2   | 3   | 3      |
| 3   | 4   | 4      |
| 4   | 5   | 5      |
| 5   | 6   | 6      |
| 6   | 7   | 7      |
| 7   | 8   | 8      |
| 8   | 9   | 9      |
| 9   | 10  | 10     |
| 10  | 11  | 11     |
| 11  | 12  | 12     |
| 12  | 13  | 13     |
| 13  | 14  | 14     |
| 14  | 15  | 15     |
| 15  | 16  | 16     |
| 16  | 17  | 17     |
| 17  | 18  | 18     |
| 18  | 19  | 19     |
| 19  | 20  | 20     |
| 20  | 21  | 21     |
| 21  | 22  | 22     |
| 22  | 23  | 23     |
| 23  | 24  | 24     |
| 24  | 25  | 25     |
| 25  | 26  | 26     |
| 26  | 27  | 27     |
| 27  | 28  | 28     |
| 28  | 29  | 29     |
| 29  | 30  | 30     |
| 30  | 31  | 31     |
| 31  | 32  | 32     |
| 32  | 33  | 33     |
| 33  | 34  | 34     |
| 34  | 35  | 35     |
| 35  | 36  | 36     |
| 36  | 37  | 37     |
| 37  | 38  | 38     |
| 38  | 39  | 39     |
| 39  | 40  | 40     |
| 40  | 41  | 41     |
| 41  | 42  | 42     |
| 42  | 43  | 43     |
| 43  | 44  | 44     |
| 44  | 45  | 45     |
| 45  | 46  | 46     |
| 46  | 47  | 47     |
| 47  | 48  | 48     |
| 48  | 49  | 49     |
| 49  | 50  | 50     |
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| 63  | 64  | 64     |
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| 67  | 68  | 68     |
| 68  | 69  | 69     |
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| 70  | 71  | 71     |
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| 77  | 78  | 78     |
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| 84  | 85  | 85     |
| 85  | 86  | 86     |
| 86  | 87  | 87     |
| 87  | 88  | 88     |
| 88  | 89  | 89     |
| 89  | 90  | 90     |
| 90  | 91  | 91     |
| 91  | 92  | 92     |
| 92  | 93  | 93     |
| 93  | 94  | 94     |
| 94  | 95  | 95     |
| 95  | 96  | 96     |
| 96  | 97  | 97     |
| 97  | 98  | 98     |
| 98  | 99  | 99     |
| 99  | 100 | 100    |

Graph 32 indicates that  $\frac{3}{5}$  of the Brava group received C's. Not one Brava received an A, while 5 % of the Whites in the same class received that mark. In the A-B group there are 42.7 % of the Whites and 30 % of the Bravas or 12.7 % more Whites. Seventy per cent (70 %) of the Bravas received either C's or F's as compared to 57 % of the Whites, which means that there are 13 % more Bravas than Whites in the C-F group.

Graph 33 indicates that 4 % more Bravas are in the C-F group, Bravas 54 %--Whites 50 %, although 11 % more Bravas received C's, Bravas 54 %--Whites 43 %. Twenty-five per cent (25 %) more Bravas received B's, Bravas 46 %--Whites 21 %, and 29 % more Whites received A's, Whites 29 % Bravas 0 %, but there are only 4 % more Whites in the A-B group, Whites 50 %--Bravas 46 %. The entire Brava group falls within the B-C bracket, while the F group lacks Brava representation.



### A Summary On English Marks.

An analysis of the English marks indicates a slight improvement (10%) in the mastery of English by the Brava group in grades 6 and 9 respectively. In grades 6, 10 % failed or received a mark of F, while in grade 9 no one received a mark lower than C. Thirty per cent (30%) of the Bravas received B's in grades 6 as compared to 46 % in grade 9 but 6 % more received C's in grades 6 (60%) than in grade 9 (54%).

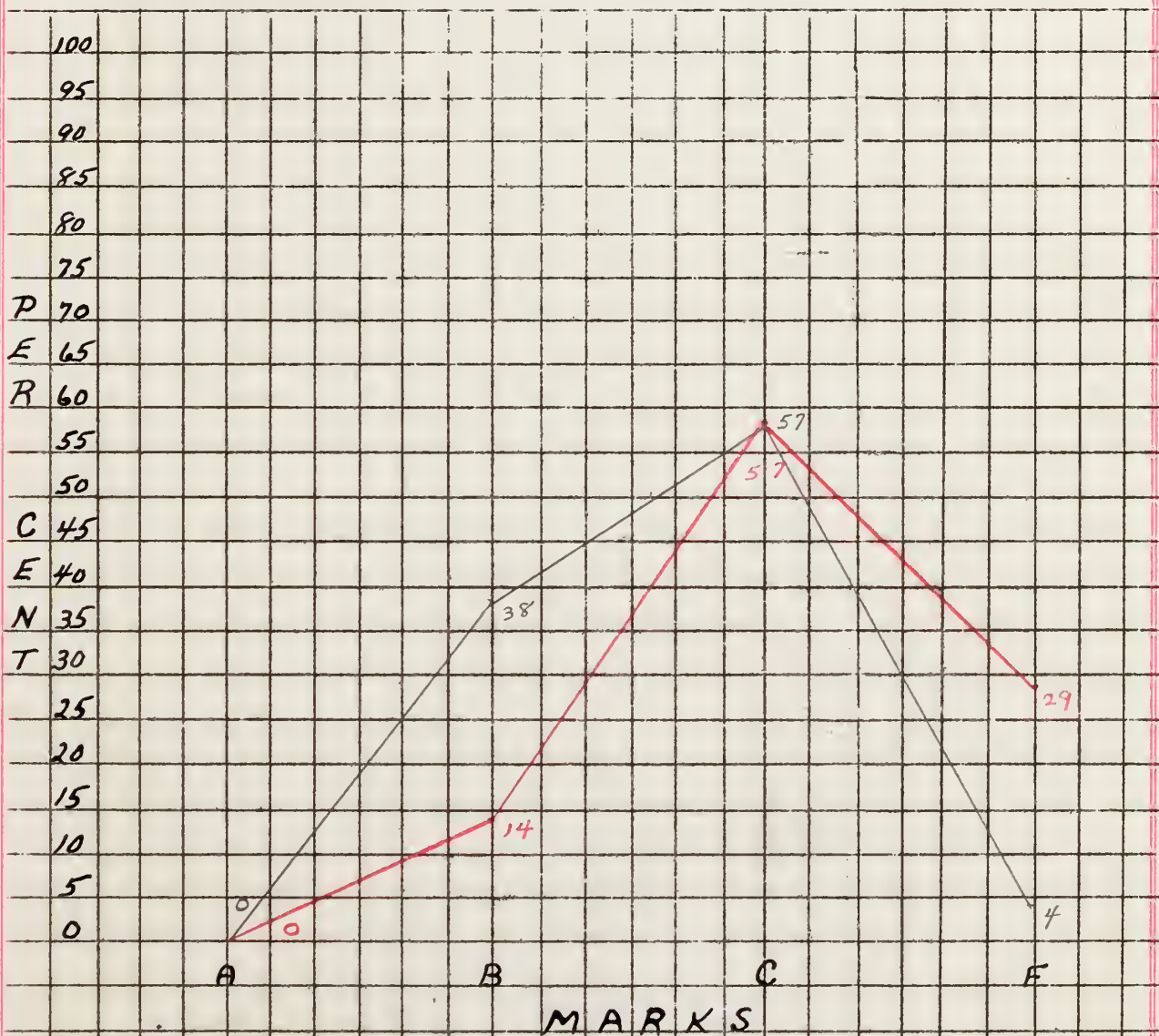
In grade 9 there is 10 % greater representation (100%) in the B-C group than in grades 6 (90 %). There is 16 % greater Brava representation in the C-F group in grades 6 (70 %) than there is in grade 9 (54 %).





GRAPH 34

THE PER CENT OF A'S, B'S, C'S, AND F'S GIVEN TO THE WHITE  
AND BRAVA PUPILS IN ARITHMETIC IN GRADES 3 OF THE PUBLIC SCHOOLS  
OF MARION, MASSACHUSETTS 1940.



Key

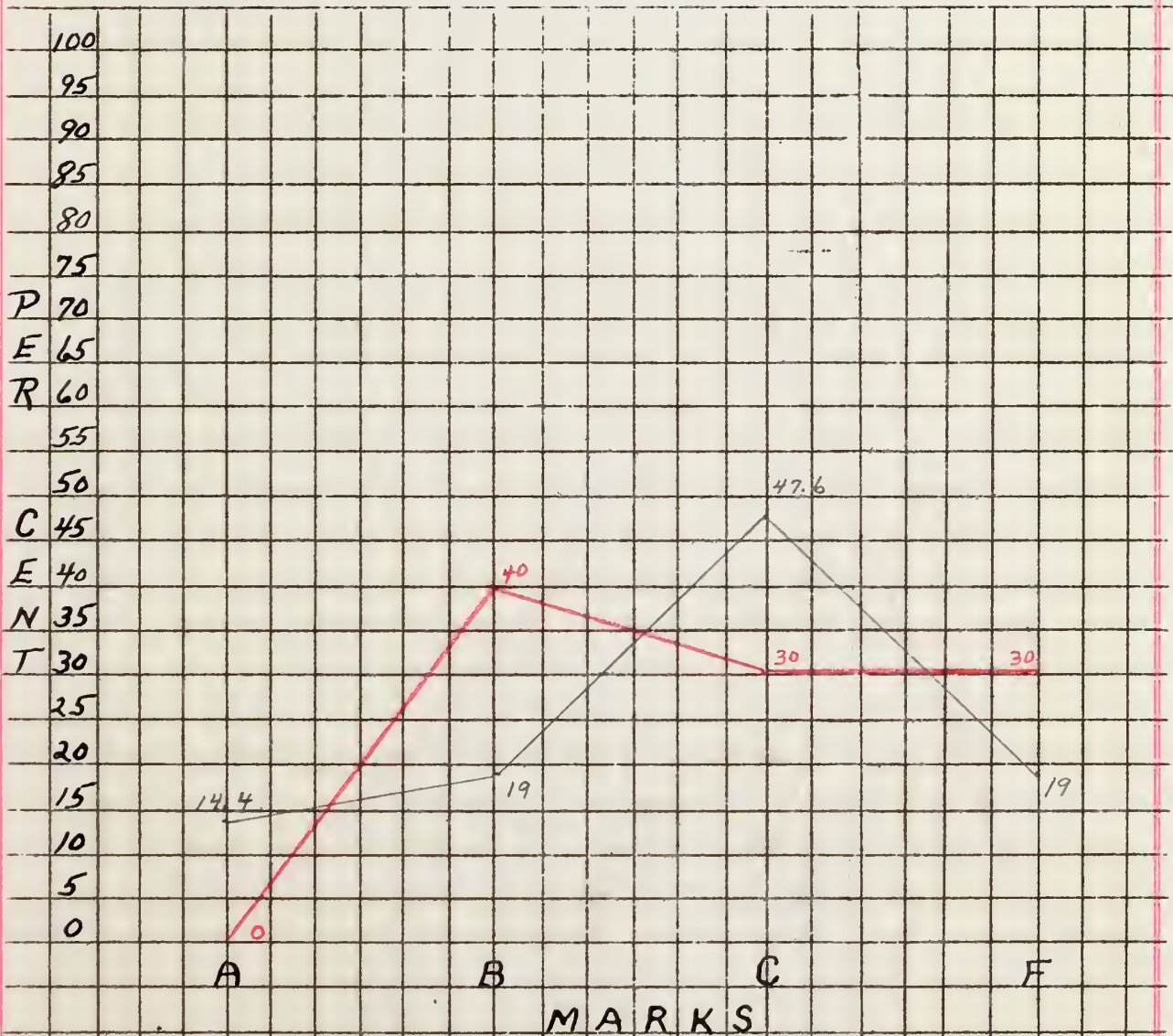
Whites —  
Bravas —





## GRAPH 35

THE PER CENT OF A'S, B'S, C'S, AND F'S GIVEN TO THE WHITE  
AND BRAVA PUPILS IN ARITHMETIC IN GRADES 6 OF THE PUBLIC SCHOOLS  
OF MARION, MASSACHUSETTS 1940.



Key

Whites —

Bravas —



PROBLEM

Find the area of the shaded region in the figure below.

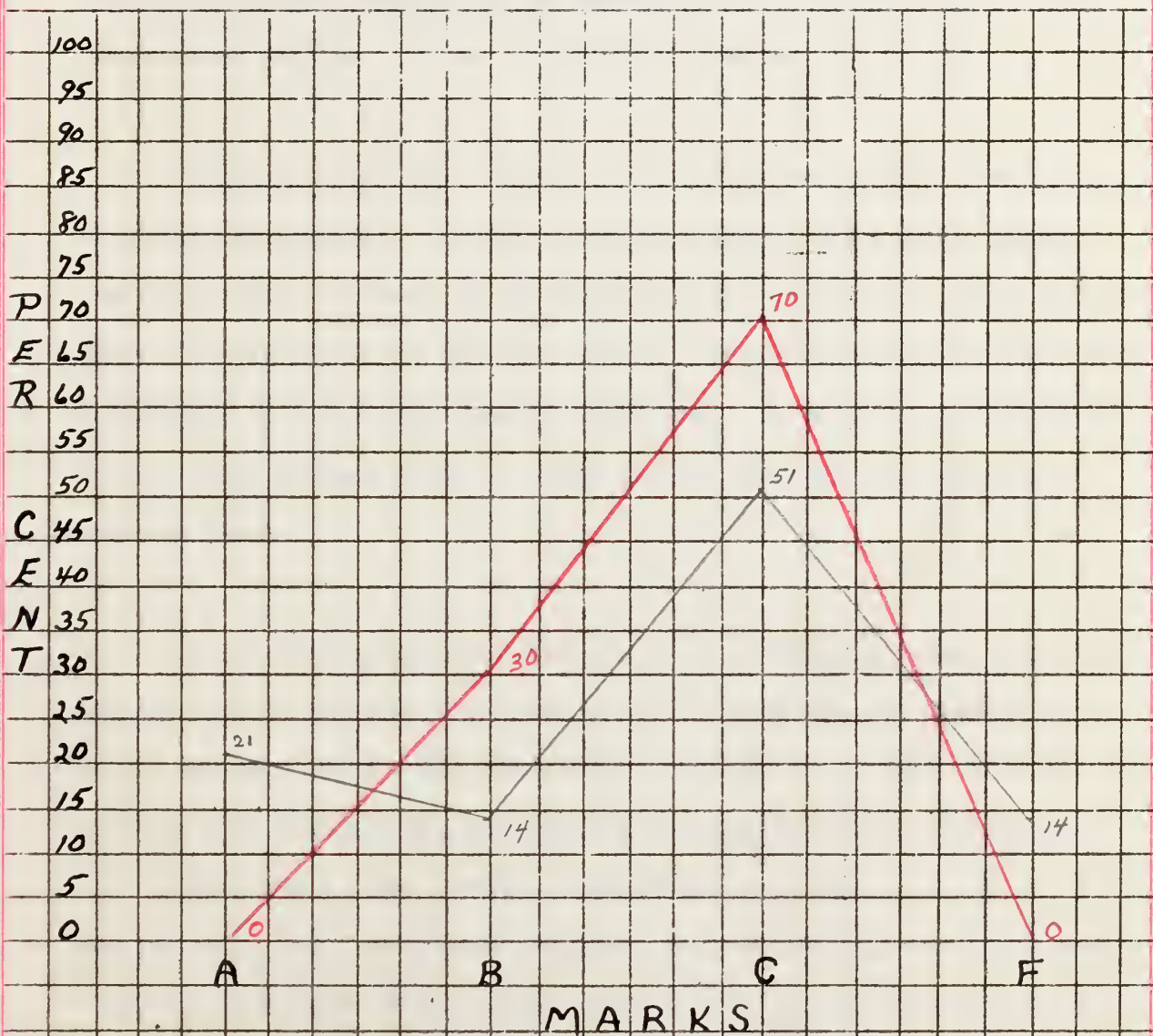
Given: A rectangle ABCD with side lengths AB = 10 cm and BC = 8 cm.

Find: The area of the shaded region.



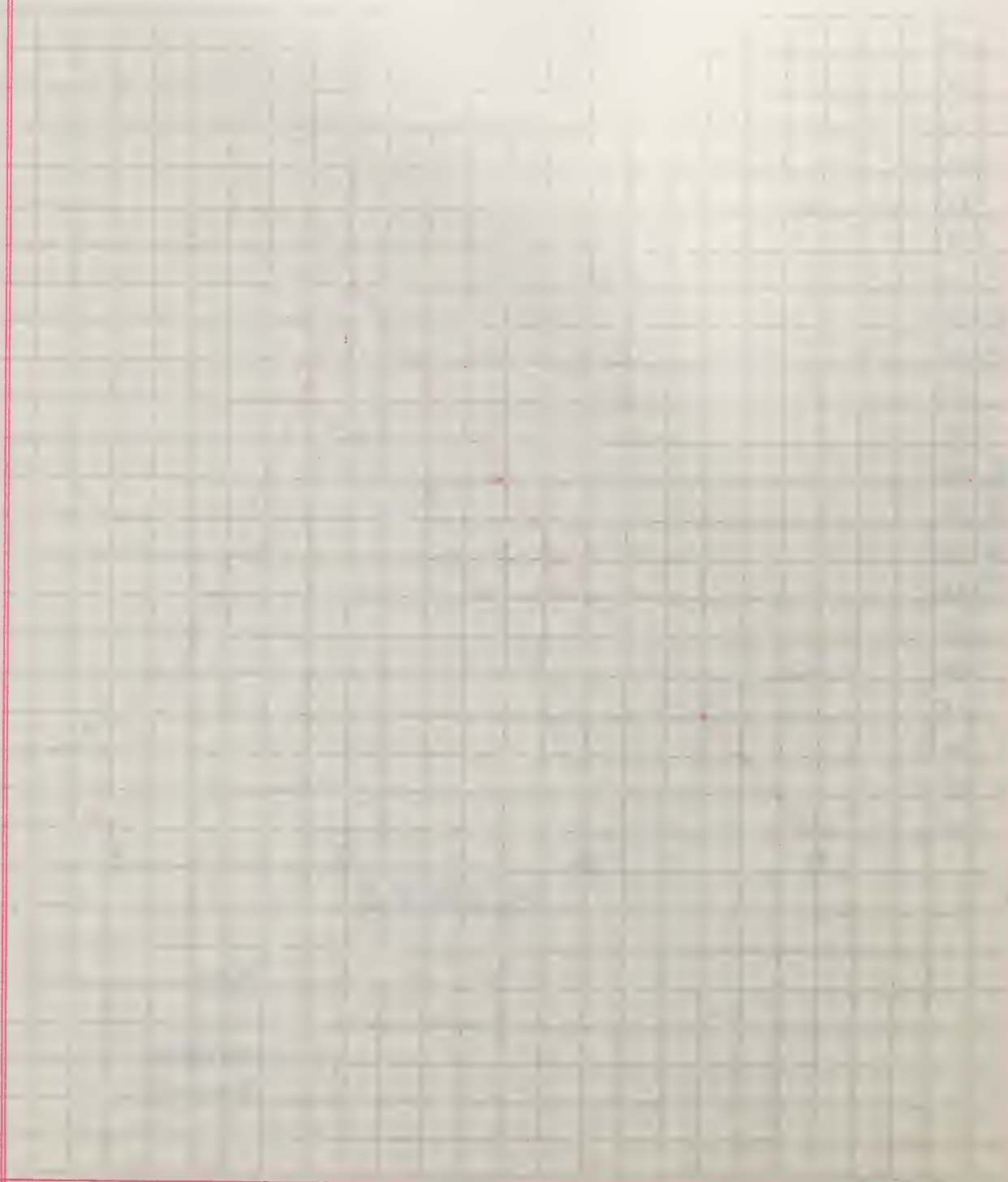
## GRAPH 36

THE PER CENT OF A'S, B'S, C'S, AND F'S GIVEN TO THE WHITE  
AND BRAVA PUPILS IN ARITHMETIC IN GRADE 9 OF THE PUBLIC SCHOOLS  
OF MARION, MASSACHUSETTS 1940.



Key

Whites —  
Bravas —





Graph 34 indicates that 24 % more Whites received B's, Whites 38 %--Bravas 14 %, and 25 % more Bravas received F's, Bravas 29 %--Whites 4 %. There are 25 % more Bravas in the C-F group, Bravas 86 %--Whites 61 %, while there are 24 % more Whites in the A-B group, Whites 38 %--Bravas 14 %.

Graph 35 indicates that 14.4 % of the Whites received A's but no Bravas. Twenty-one per cent (21%) more Bravas received B's, Bravas 40 %--Whites 19 %; however, only 6.6 % more Bravas were in the A-B group, Bravas 40 %--Whites 33.4%. Although 30 % of the Bravas received C's and 30 % failed, 6.6 % more Whites were in the C-F group, Whites 66.6 %--Bravas 60 %.

Graph 36 indicates that 21 % more Whites received A's, Whites 21 %--Bravas 0 %, while 16 % more Bravas received B's , Bravas 30 %--Whites 14 %; however, 5 % more Whites are in the A-B group, Whites 35 %--Bravas 30 %. Nineteen per cent (19%) more Bravas received C's, Bravas 70 %--Whites 51%, and 14 %, more Whites failed, Whites 14 %--Bravas 0 %, but 5 %, more Bravas are in the C-F group, Bravas 70 %--Whites 65 %. The entire Brava enrollment (100%) is in the B-C group.



1. The first part of the report deals with the general situation of the country. It is a very interesting and informative study of the country's development and progress. The author has done a great deal of research and has gathered a wealth of material. The report is well written and is easy to read. It is a valuable contribution to the knowledge of the country and its people.

2. The second part of the report deals with the economic situation of the country. It is a very interesting and informative study of the country's economic development and progress. The author has done a great deal of research and has gathered a wealth of material. The report is well written and is easy to read. It is a valuable contribution to the knowledge of the country and its people.

3. The third part of the report deals with the social situation of the country. It is a very interesting and informative study of the country's social development and progress. The author has done a great deal of research and has gathered a wealth of material. The report is well written and is easy to read. It is a valuable contribution to the knowledge of the country and its people.

### A Summary On Arithmetic Marks.

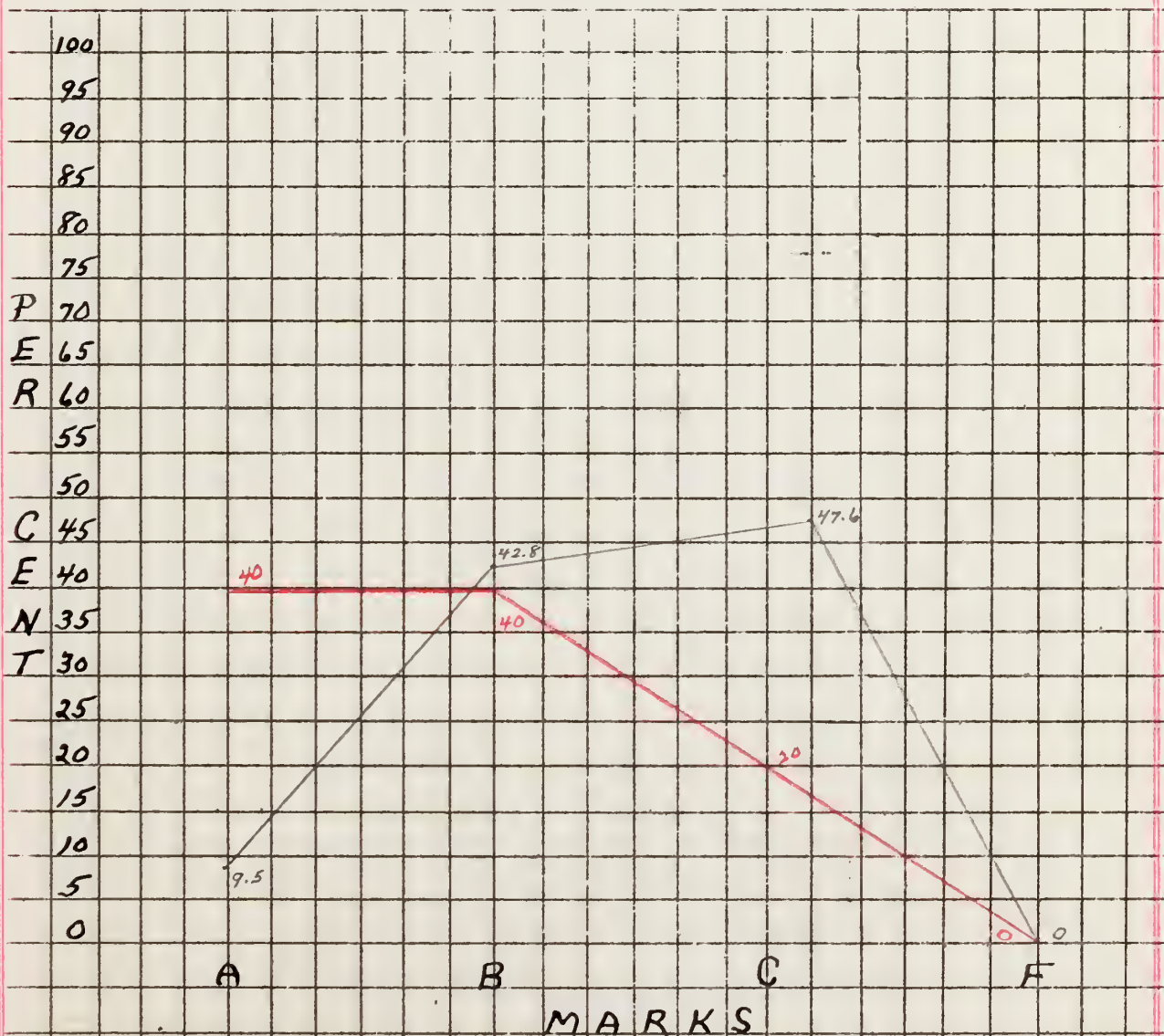
As the Brava progresses from grades 3 to 9 respectively, the statistics as to the marks attained in Arithmetic indicate improvement. In no instance is there an indication of a Brava receiving an A. In grades 3, 29 % failed (F) while not a single member of the group attained a similar mark in grade 9. In the third grades, 71 % of the group were represented in the B-C bracket as compared to 70 % in grades 6 and 100 % in grade 9, an improvement of 29 % in 6 grades. Likewise, in grades 3, 86 % of the group were represented in the C-F bracket as compared to 60 % in grades 6 and 70 % in grade 9, a decrease of 16 % in 6 grades.

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## GRAPH 37

THE PER CENT OF A'S, B'S, C'S, AND F'S GIVEN TO THE WHITE  
AND BRAVA PUPILS IN ART IN GRADES 6 OF THE PUBLIC SCHOOLS  
OF MARION, MASSACHUSETTS 1940.



Key

Whites —

Bravas —



1. The first part of the document is a list of names and addresses.

2. The second part of the document is a list of names and addresses.

3. The third part of the document is a list of names and addresses.

4. The fourth part of the document is a list of names and addresses.

5. The fifth part of the document is a list of names and addresses.

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25. The twenty-fifth part of the document is a list of names and addresses.

26. The twenty-sixth part of the document is a list of names and addresses.

27. The twenty-seventh part of the document is a list of names and addresses.

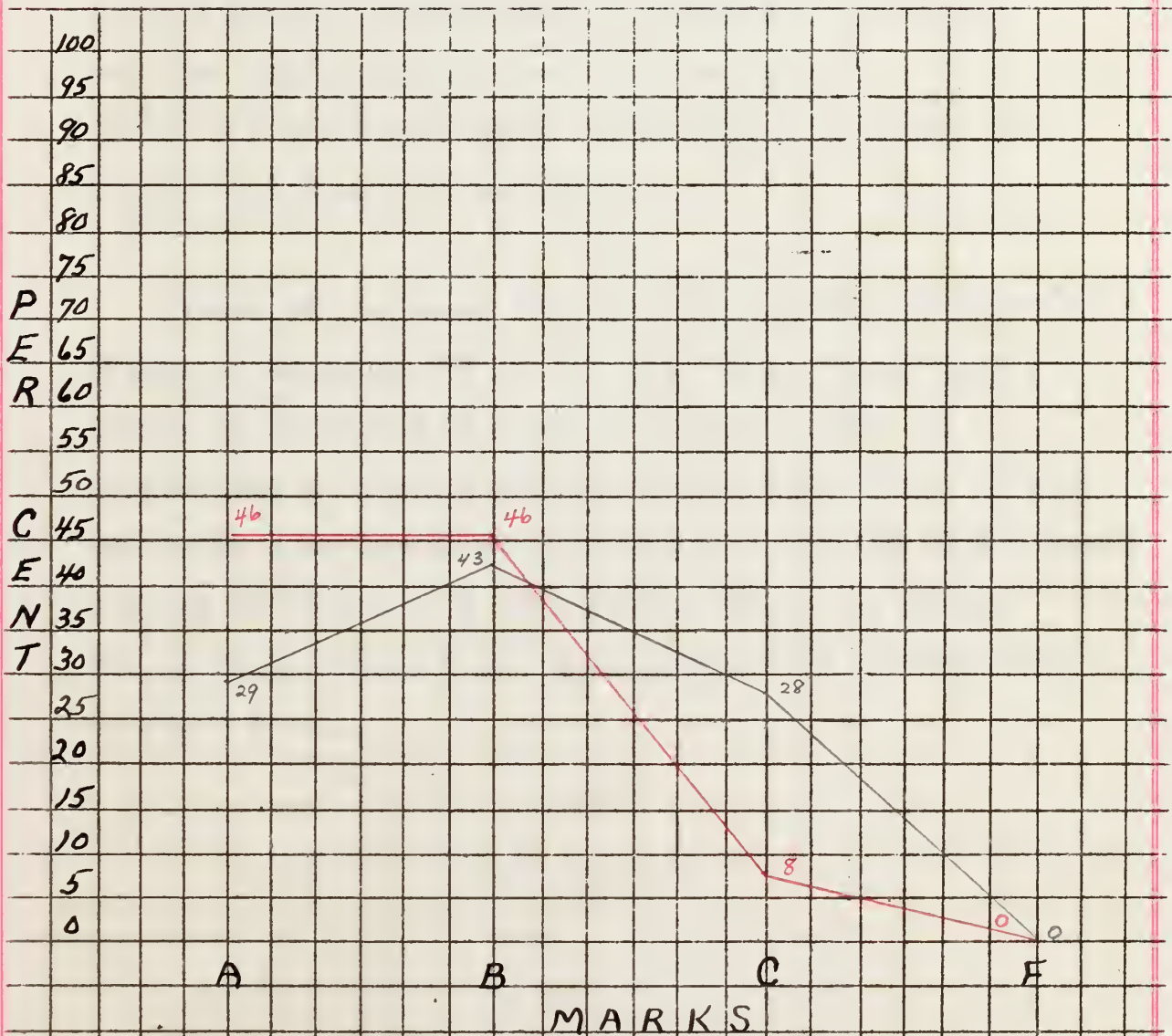
28. The twenty-eighth part of the document is a list of names and addresses.

29. The twenty-ninth part of the document is a list of names and addresses.

30. The thirtieth part of the document is a list of names and addresses.

## GRAPH 38

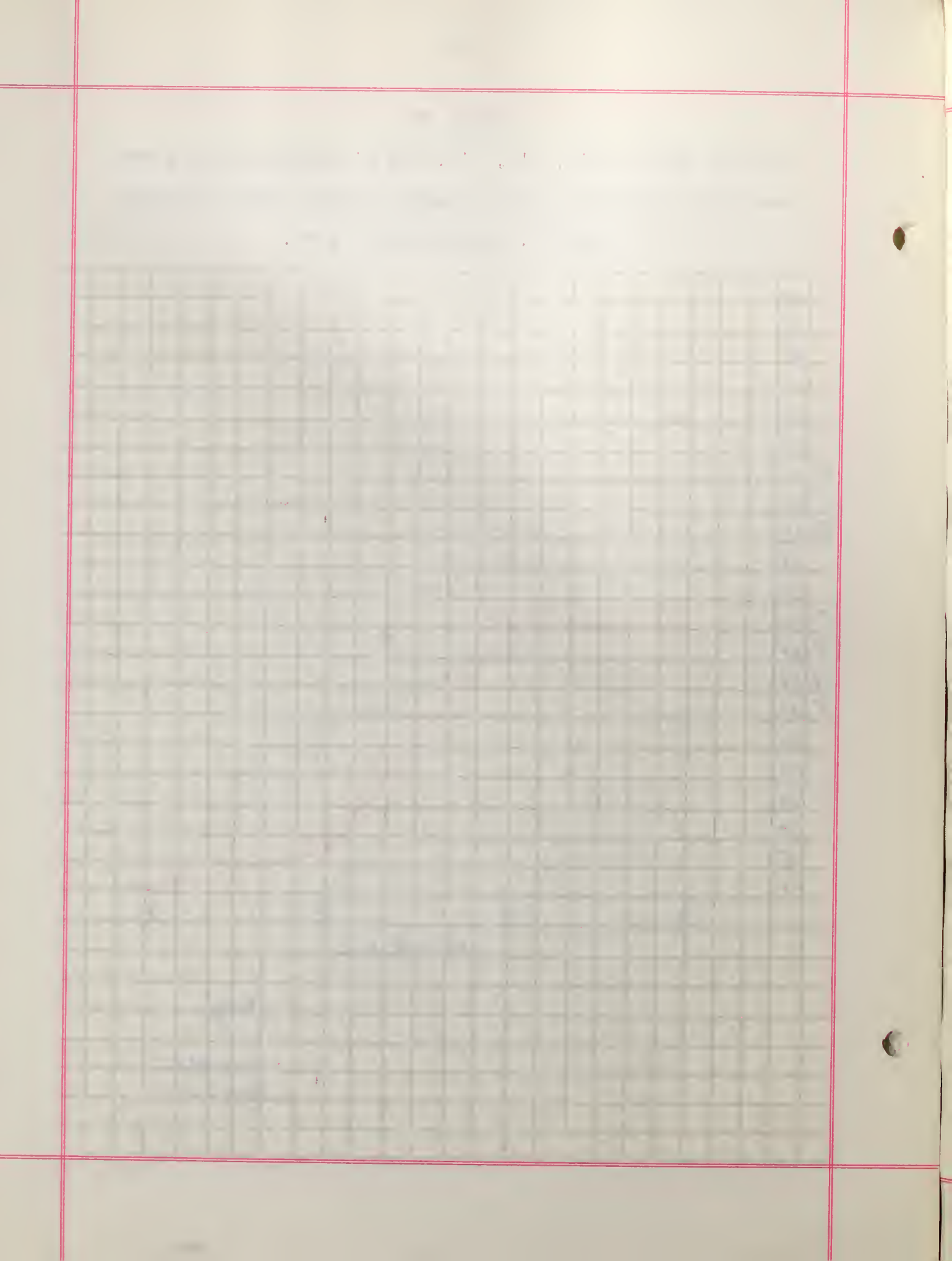
THE PER CENT OF A'S, B'S, C'S, AND F'S GIVEN TO THE WHITE  
AND BRAVA PUPILS IN ART IN GRADE 9 OF THE PUBLIC SCHOOLS  
OF MARION, MASSACHUSETTS 1940.



Key

Whites —

Bravas —



Graph 37 indicates that 52.3 % of the Whites received A's or B's while 80 % of the Bravas received the same marks. Only 20 % of the Bravas got C's as compared to 47.6% for the Whites. There were no failures. The Bravas received approximately four times as many A's, Bravas 40 %-Whites 9.5 %,and only about  $\frac{2}{5}$  as many C's, Bravas 20 %--Whites 47.6 %,as did the Whites.

Graph 38 indicates that 15 % more Bravas received A's, Bravas 46 %--Whites 29 %; 3 % more Bravas received B's, Bravas 46 %--Whites 43 %,and 20 % more Bravas are represented in the A-B group, Bravas 92 %--Whites 72 %. The White group received 20 % more C's, Whites 28 %--Bravas 8 %,and there are 20 % more Whites in the C-F group, Whites 28 %--Bravas 8 %. Both groups lack representation in the F group.





### A Summary On Art And Handwork Marks.

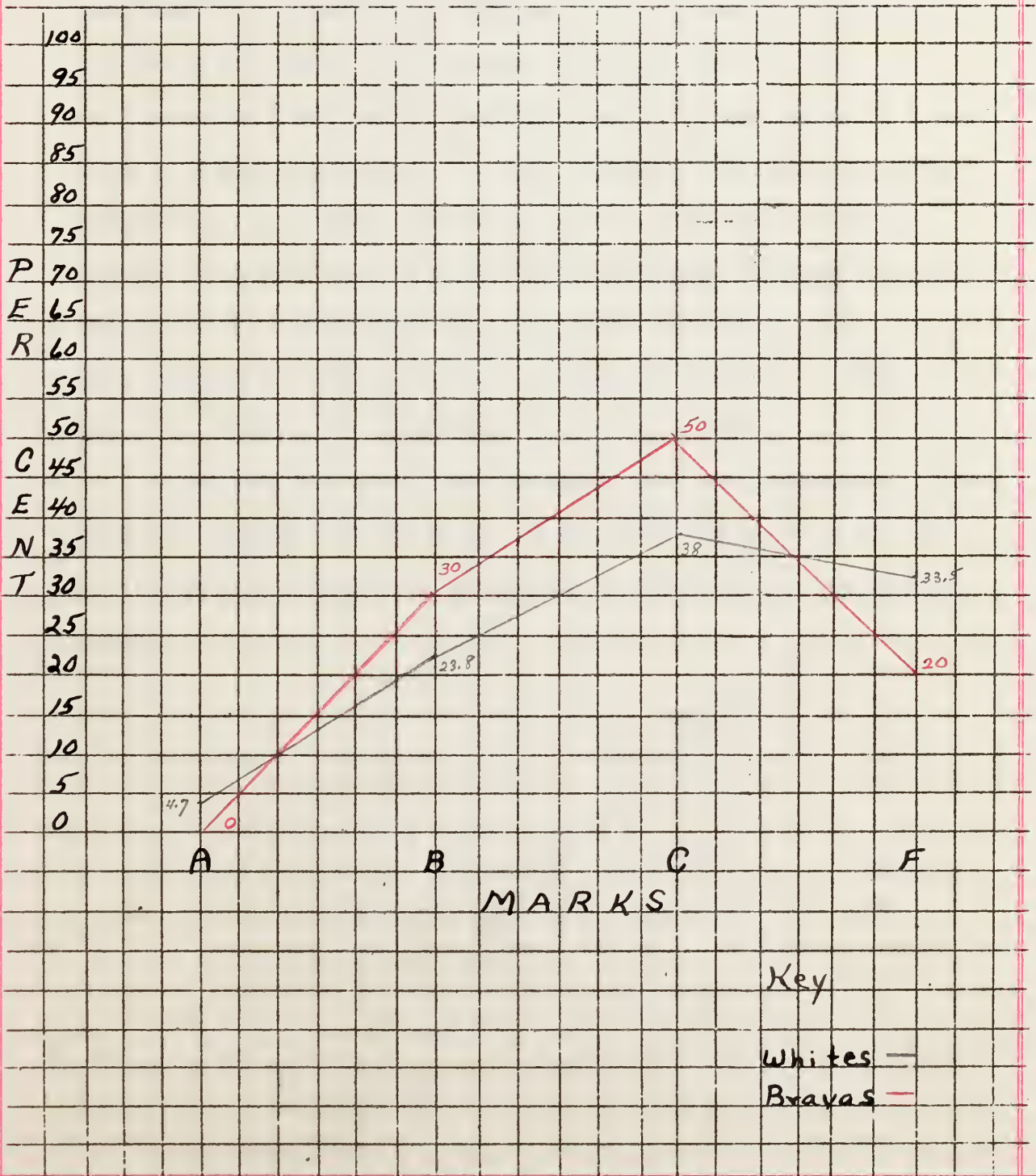
Art and Handwork is the one phase of school work in which the Brava excels ; as he progresses, he gradually becomes more efficient. In neither grades 6 nor 9 is there evidence of Brava failure. In the sixth grades approximately 4 times as many Bravas as Whites received a mark of A, Bravas 40 %--Whites 9.5 %; a similar condition exists in grade 9, Bravas 46 %--Whites 29 %.

In grades 6, 20 % of the group received a mark of C as compared to 8 % in grade 9, an improvement of 11 % in 3 years. Eighty per cent (80) of the Brava group received either A's or B's in grade 6; 86 % were in a similar group in grade 9, indicating an improvement of 6 % in 3 years.

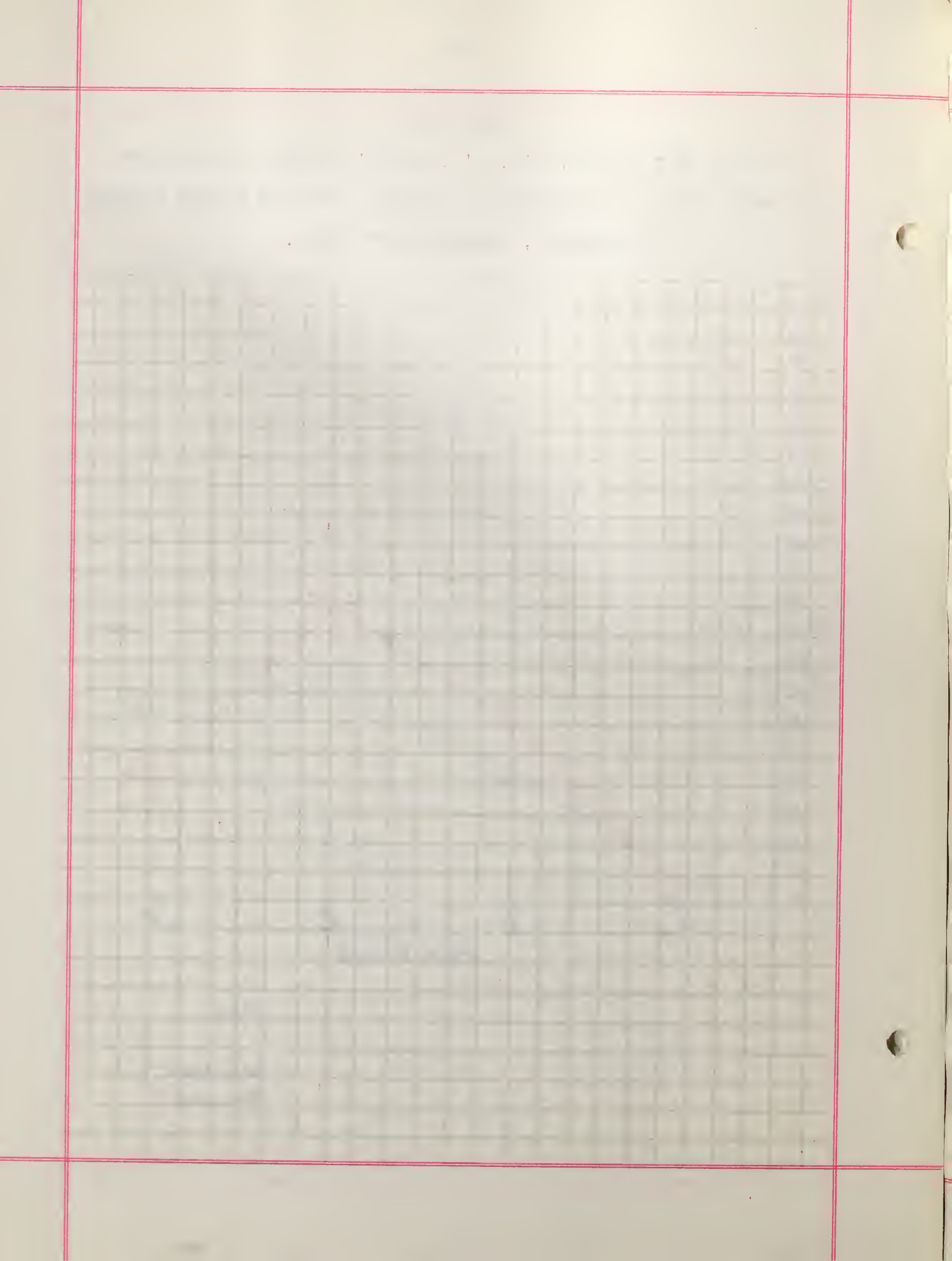


GRAPH 39

THE PER CENT OF A'S, B'S, C'S, AND F'S GIVEN TO THE WHITE  
AND BRAVA PUPILS IN GEOGRAPHY IN GRADES 6 OF THE PUBLIC SCHOOLS  
OF MARION, MASSACHUSETTS 1940.







Graph 39 indicates that approximately the same per cent, 30 % and 28.5 % respectively, of A's and B's were acquired by both Bravas and Whites; however the Whites received 4.7 % more A's, Whites 4.7 %--Bravas 0 %, and the Bravas 6.2 % more B's, Bravas 30 %--Whites 23.8 %. It is well to note that approximately the same per cent, 70 % and 71.5 % respectively, of C's and F's were obtained by both groups but 12 % more Bravas received C's, Bravas 50 %--Whites 38 %, and 13.5 % more Whites failed, Whites 33.5 %--Bravas 20 %. Approximately the same per cent were represented in both the A-B, Bravas 30 %--Whites 28.5 %, and C-F, Bravas 70 %--Whites 71.5 %, groups.

Thus, the Brava can do average work in Geography; since 30 % or  $\frac{3}{10}$  got B's; 50 % or  $\frac{1}{2}$  got C's. Only 20 % or  $\frac{1}{5}$  of the Bravas failed as compared to 33.5 % for the White group.



## GRAPH 40

THE PER CENT OF A'S, B'S, C'S, AND F'S GIVEN TO THE WHITE  
AND BRAVA PUPILS IN HISTORY IN GRADES 6 OF THE PUBLIC SCHOOLS  
OF MARION, MASSACHUSETTS 1940.



Key

Whites —

Bravas —





Graph 40 indicates that the Whites received 9.5 % more A's, Whites 9.5 %--Bravas 0 %; 8 % more B's, Whites 38%--Bravas 30 %;and 8 % more C's, Whites 38 %--Bravas 30 %. The Whites received 17.5 % more A's and B's, Whites 47.5 %--Bravas 30 %,and 17.5 % fewer C's and F's, Bravas 70 %--Whites 52.5 %. Twenty-five and five-tenths per cent (25.5 %) more Bravas failed , Bravas 40 %--Whites 14.5 %, than did Whites.

Thus, the Brava has difficulty with History, since not a single person received an A, 40 % or / of the group failed and 70 % or / of the group were in the C-F group.

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CHAPTER VII

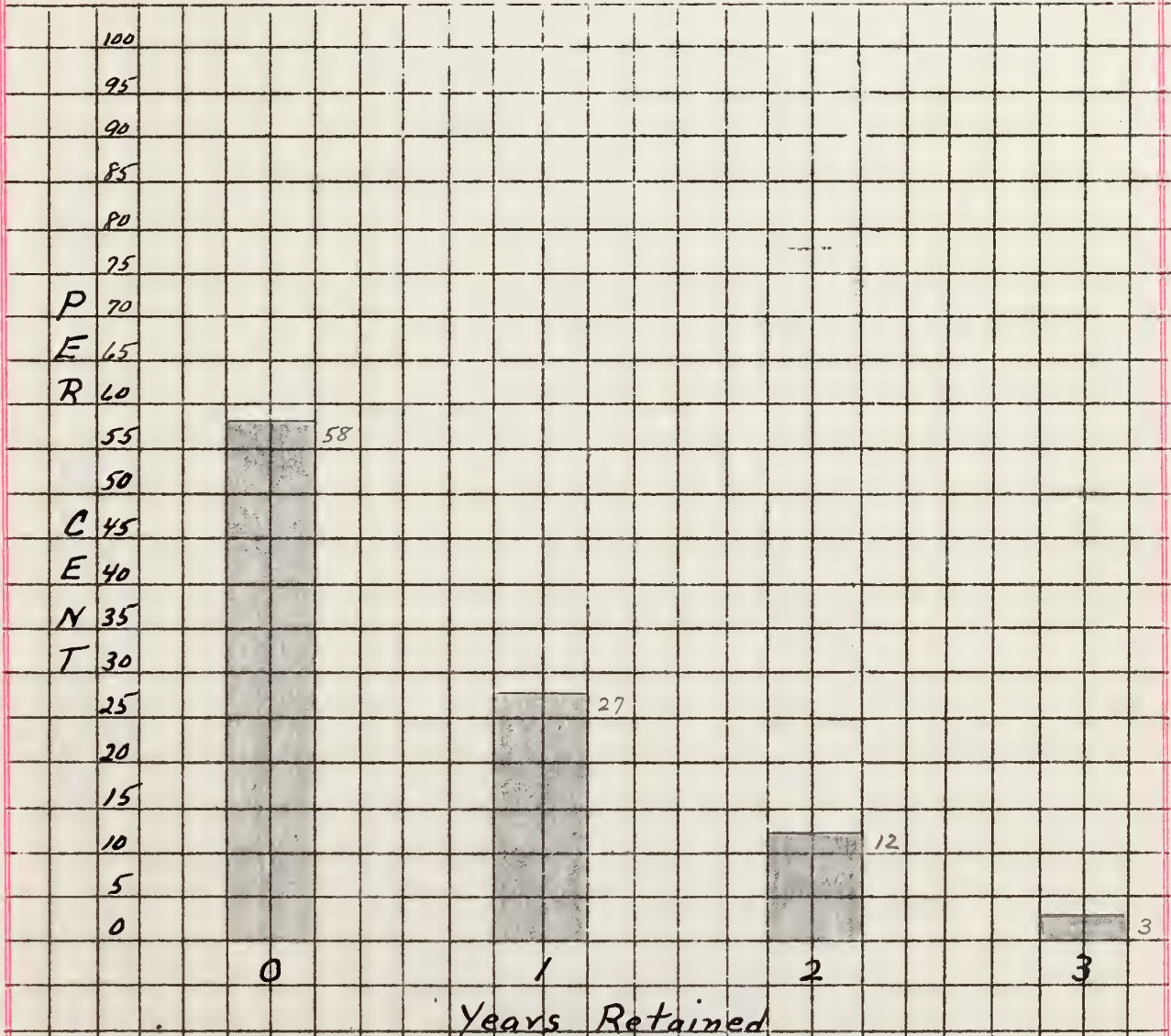
RETENTION IN GRADES 3 - 6 - 9.

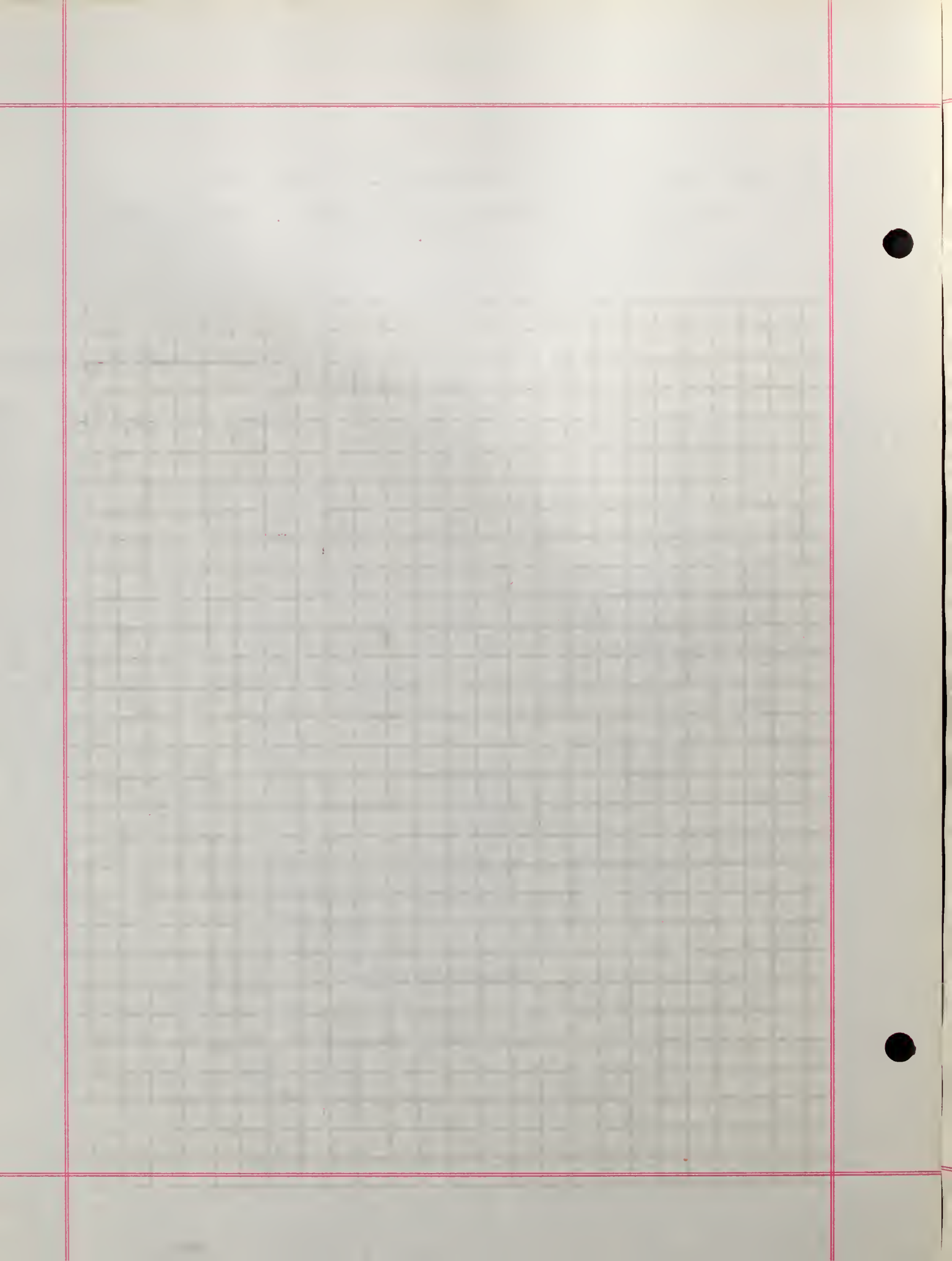




GRAPH 41

THE PERCENTAGE OF RETARDATION FOR THE TOTAL ENROLLMENT  
OF GRADES 3 IN THE PUBLIC SCHOOLS OF MARION, MASSACHUSETTS  
1940.

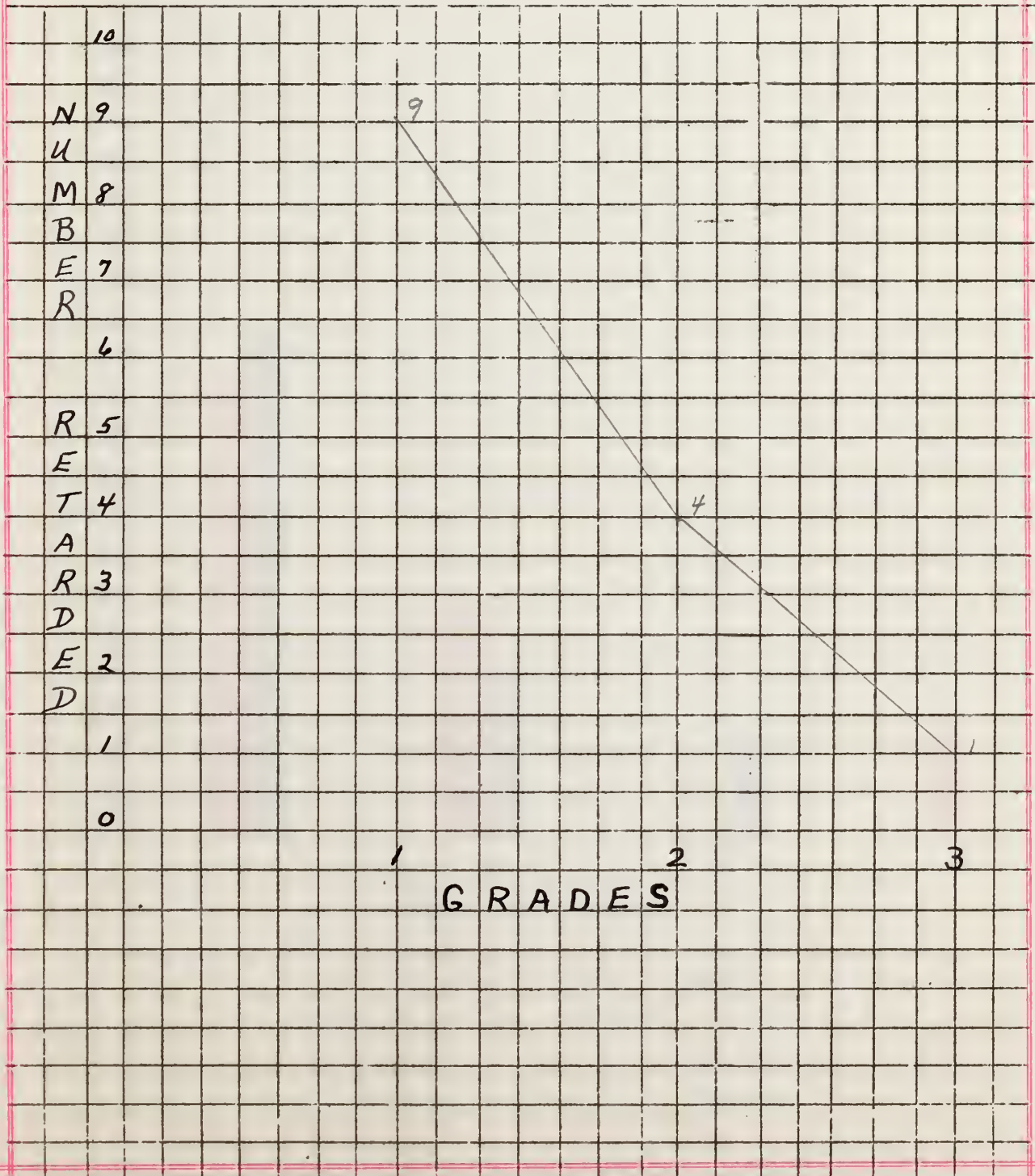




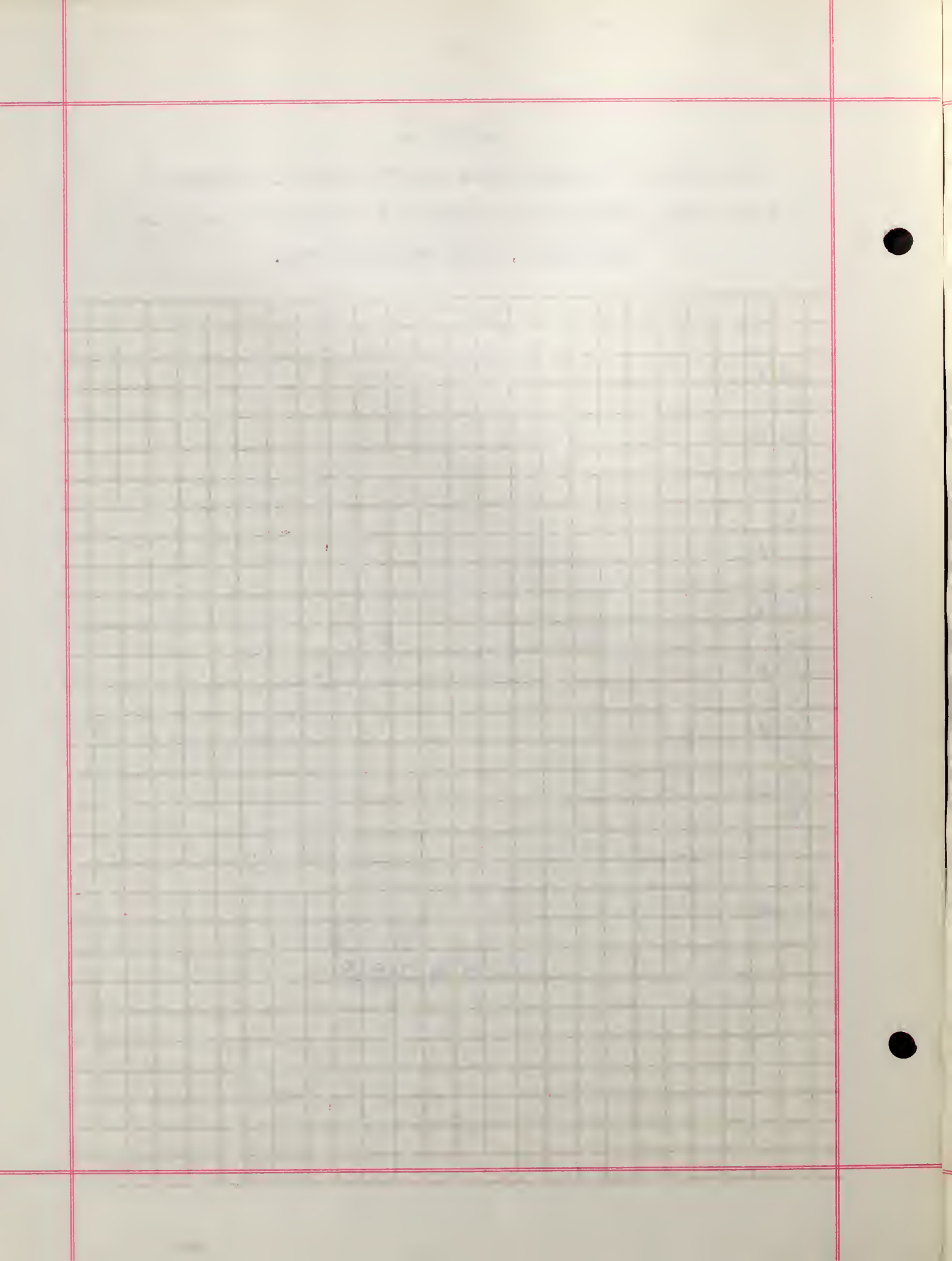


## GRAPH 42

THE NUMBER OF RETARDATIONS AND THE SPECIFIC GRADES IN WHICH THEY OCCURRED FOR GRADES 3 IN THE PUBLIC SCHOOLS OF MARION, MASSACHUSETTS 1940.

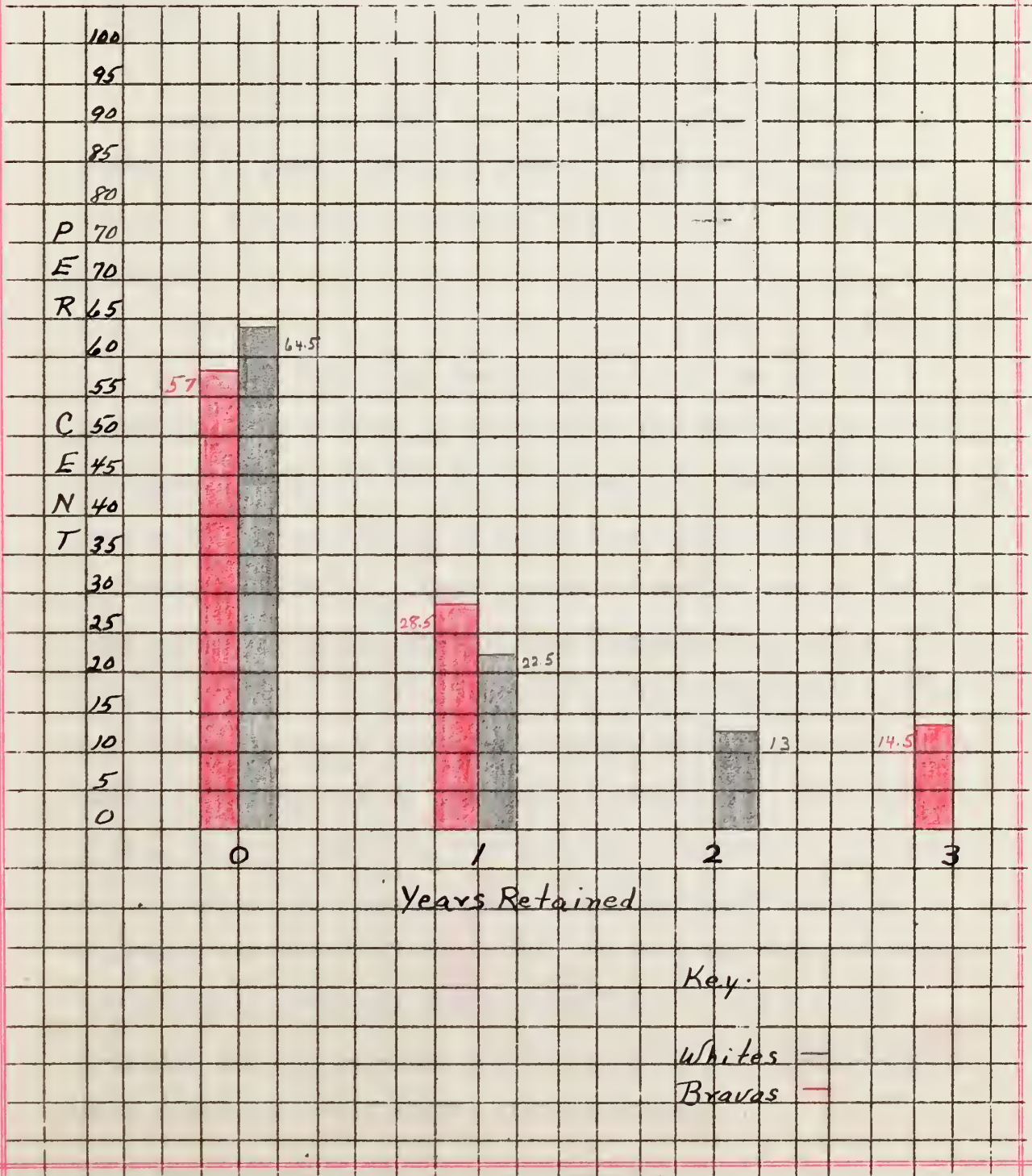


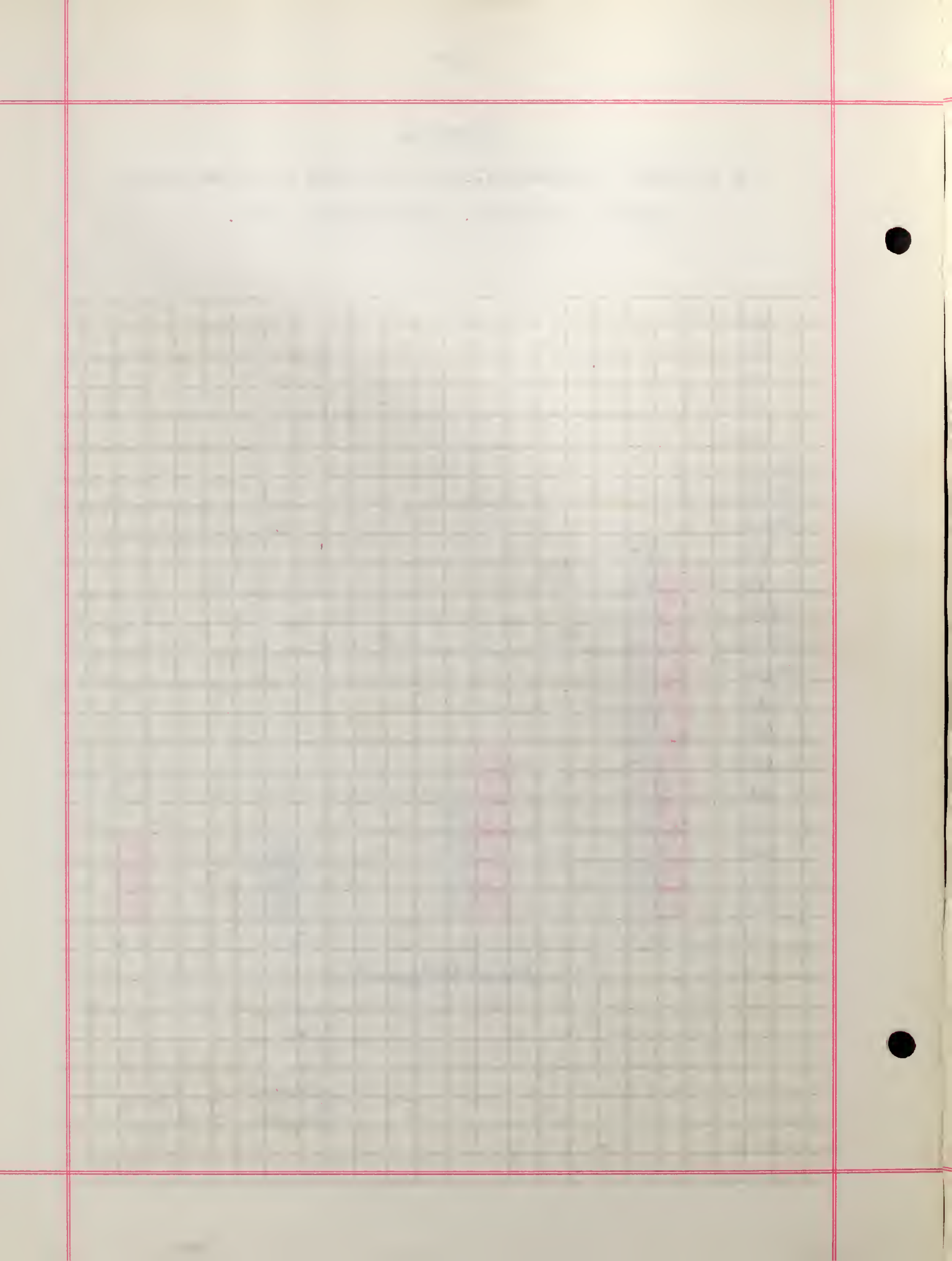




GRAPH 43

THE PER CENT OF RETARDATIONS FOR GRADES 3 IN THE PUBLIC  
SCHOOLS OF MARION, MASSACHUSETTS 1940.







Graph 41 indicates that 58 % of the entire enrollment in grades 3 have never been retained in any grade but that 27 % of the group have failed to be promoted one year; 12 % have been retarded 2 years and 3 % have been retarded 3 years.

Graph 42 indicates that of those people completing grades 3 in June, 1940, the greatest number (9) repeated grade 1. Four people repeated grade 2 and 1 person repeated grade 3.

Graph 43 shows the percentages of White and Brava retentions for grades 3, 64.5 % of the Whites have not repeated a grade in the first 3 years of their school career as compared with 57 % for the Brava enrollment; a difference of 7.5 %. Twenty-eight and five-tenths per cent (28.5 %) of the Bravas have repeated 1 year as compared to 22.5 % for the Whites. These statistics point out that only 7.5 % more Whites than Bravas have not been retained in any one of the first 3 grades, Bravas 57 %--Whites 64.5 %. There is 6 % greater retention of the Brava for a period of 1 year, Bravas 28.5 %--Whites 22.5 %. Thirteen per cent (13 %) of the White group was retained for 2 years; no Brava was retained for 2 years only. Fourteen and five-tenths per cent (14.5%) of the Bravas were retained for 3 years, but no Whites.



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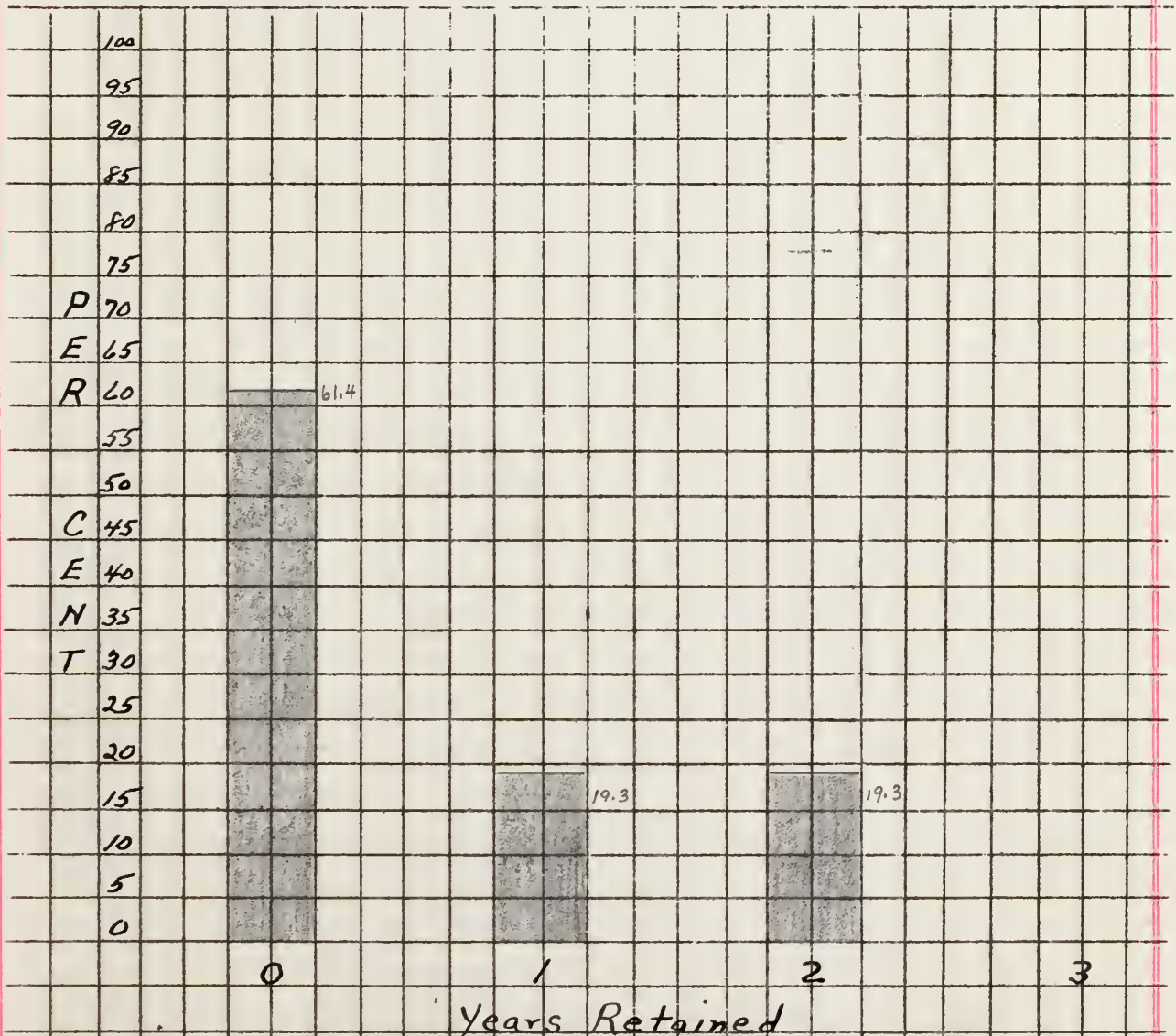
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## GRAPH 44

THE PERCENTAGE OF RETARDATION FOR THE TOTAL ENROLLMENT  
OF GRADES 6 IN THE PUBLIC SCHOOLS OF MARION, MASSACHUSETTS  
1940.



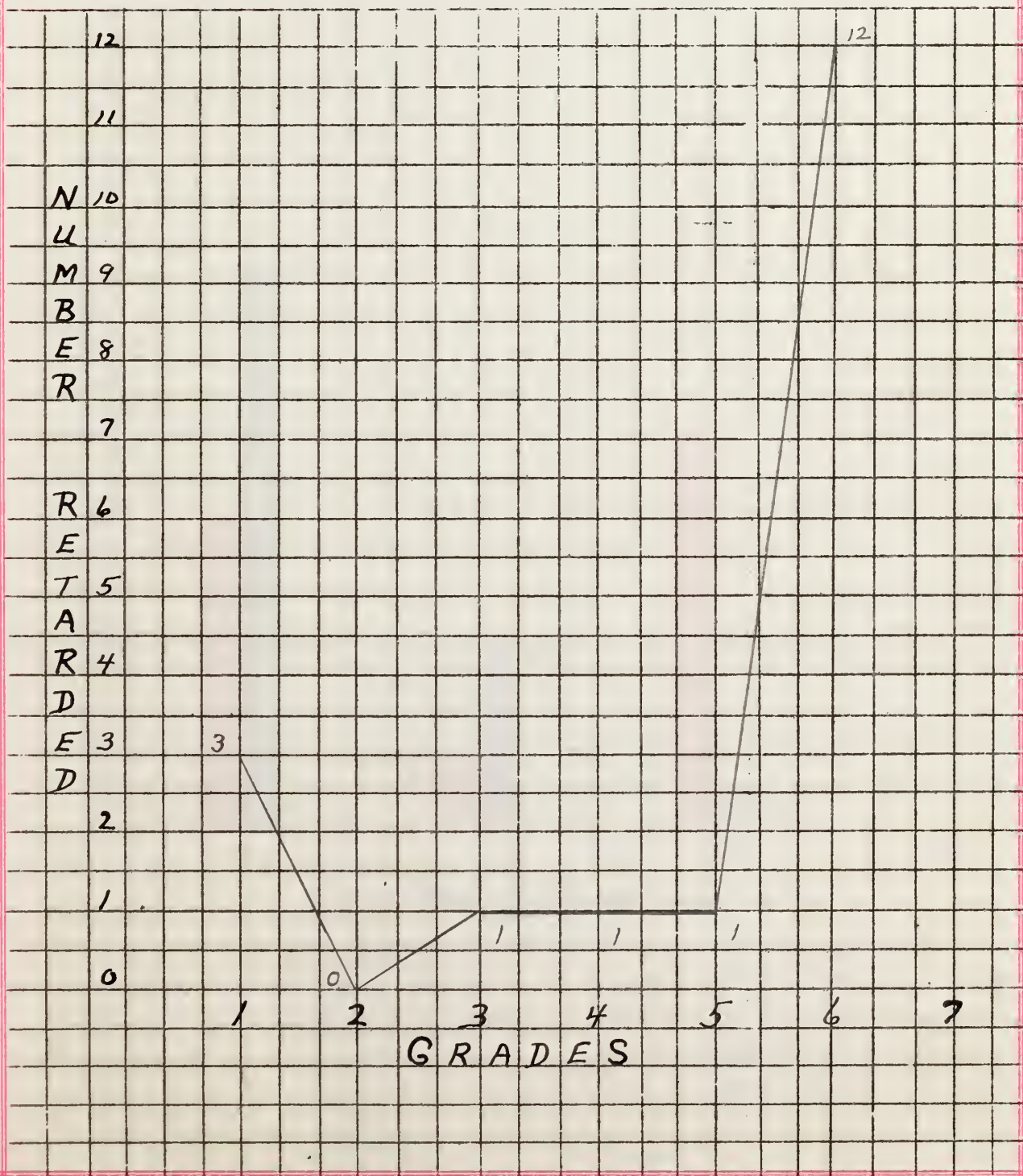
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## GRAPH 45

THE NUMBER OF RETARDATIONS AND THE SPECIFIC GRADES IN WHICH THEY OCCURRED FOR GRADES 6 IN THE PUBLIC SCHOOLS OF MARION, MASSACHUSETTS 1940.



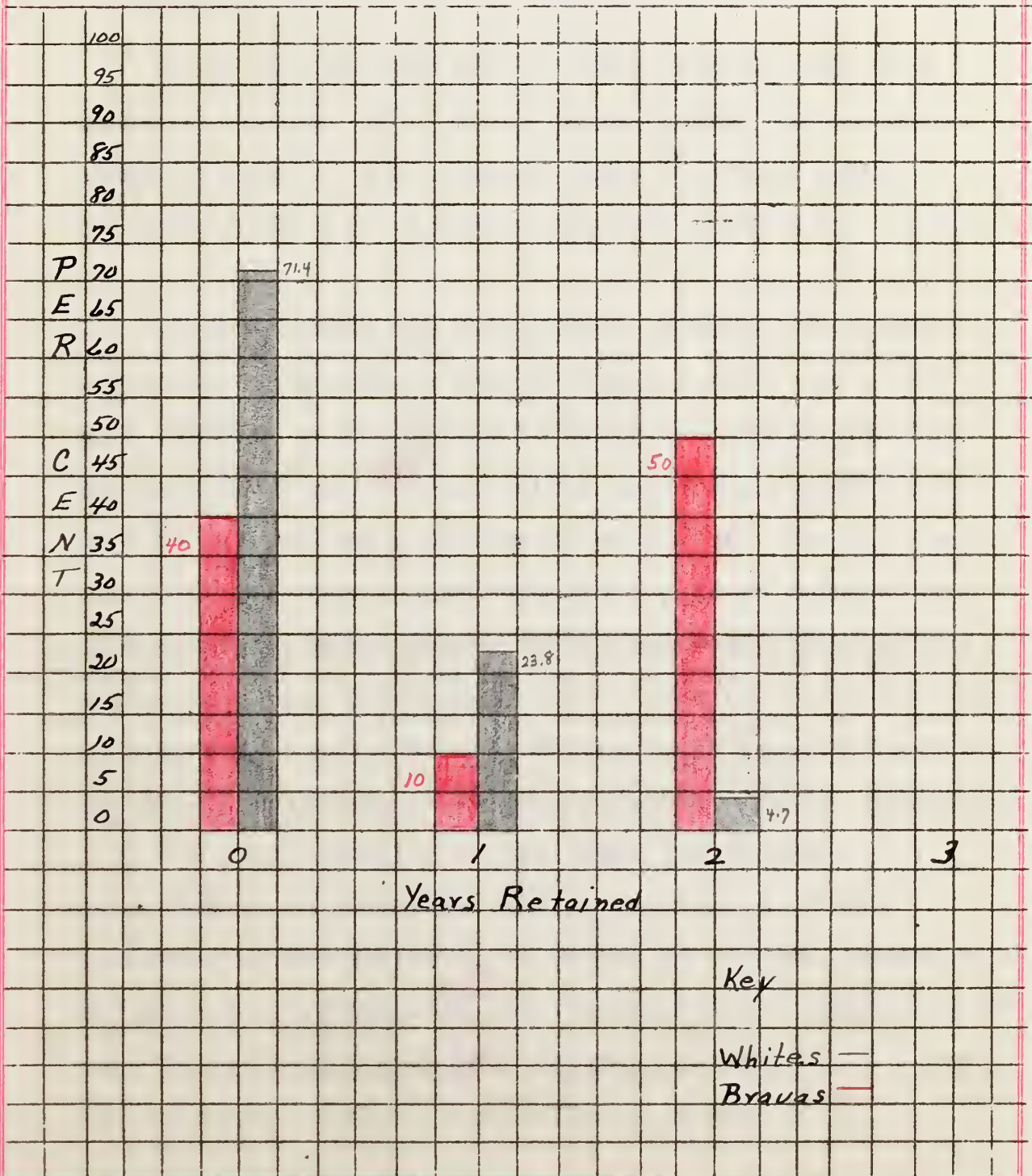


1. The first part of the paper is devoted to a general discussion of the problem of the existence of solutions of the system of equations (1) for arbitrary values of the parameters  $\alpha$  and  $\beta$ . It is shown that the system has solutions for all values of the parameters  $\alpha$  and  $\beta$  if the conditions (2) are satisfied. The second part of the paper is devoted to a detailed analysis of the properties of the solutions of the system (1) for arbitrary values of the parameters  $\alpha$  and  $\beta$ . It is shown that the solutions of the system (1) are unique and stable with respect to the initial conditions. The third part of the paper is devoted to a numerical analysis of the solutions of the system (1) for arbitrary values of the parameters  $\alpha$  and  $\beta$ . It is shown that the solutions of the system (1) can be calculated with high accuracy using the method of finite differences.



GRAPH 46

THE PER CENT OF RETARDATIONS FOR GRADES 6 IN THE PUBLIC  
SCHOOLS OF MARION, MASSACHUSETTS 1940.



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DEPARTMENT OF CHEMISTRY  
JANUARY 1964





Graph 44 indicates that 61.4 % of the entire enrollment of grades 6 have never been retained in any grade but that 19.3 % of the group have failed to be promoted 1 year and that 19.3 % have been retarded 2 years.

Graph 45 indicates that of those pupils completing grades 6 in June, 1940, the greatest number (12) repeated grade 6, while no one repeated grade 2. Three people repeated grade 1 and 1 person repeated grade 4 and 1, grade 5.

Graph 46 shows the percentages of White and Brava retention for grades 6. Seventy-one and four-tenths per cent (71.4 %) of the Whites have not repeated a grade in the first 6 years of their school career as compared with 40 % of the Bravas, a difference of 31.4 %. Ten per cent (10 %) of the Bravas have repeated 1 year as compared to 23.8 % for the White group. Fifty per cent (50 %) of the Bravas have been retained 2 years during the first 6 grades as compared to 4.7 % for the Whites; that is, approximately 10 times more Bravas have been retained 2 years. There is a 13.8 % less retention of the Brava for a period of 1 year, Bravas 10 %--Whites 23.8 %; but 45.3 % greater retention of the Bravas for a period of 2 years, Bravas 50 % Whites 4.7 %. Thirty-one and four-tenths per cent (31.4 %) more Whites than Bravas have not been retained in any one of the first 6 grades, Whites 71.4 %--Bravas 40 %.



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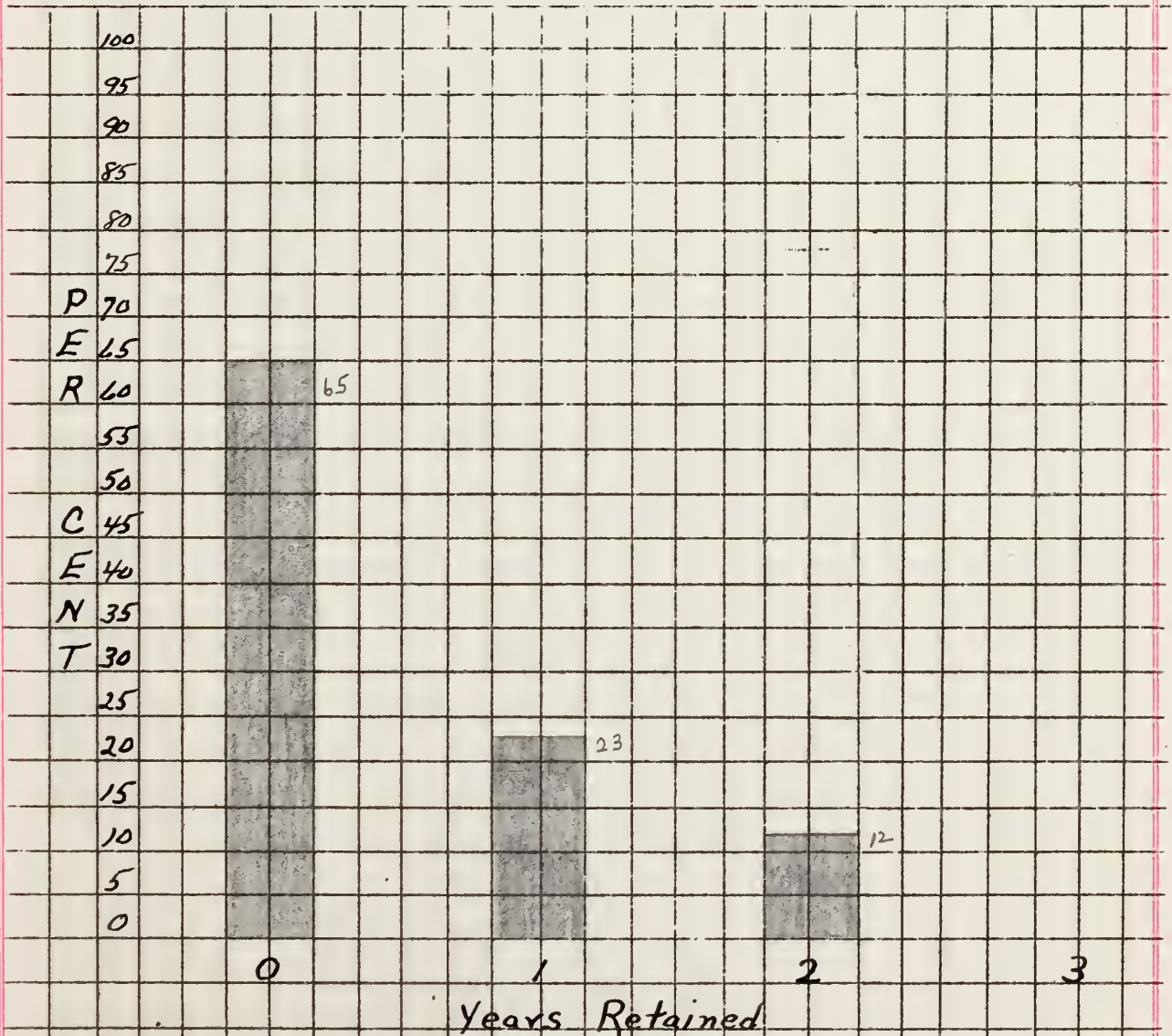
PROFESSOR [Name]  
[Address]  
[City, State, Zip]

Dear Professor [Name]:  
I am writing to you regarding the [topic] of your recent paper. I have read the paper with great interest and found it very informative. The data presented in the paper is very convincing and the conclusions are well supported. I am particularly impressed by the [specific detail]. I am sure that your work will be of great value to the field. I am looking forward to seeing your next work.

Sincerely,  
[Signature]  
[Name]  
[Title]

## GRAPH 47

THE PERCENTAGE OF RETARDATION FOR THE TOTAL ENROLLMENT  
OF GRADE 9 IN THE PUBLIC SCHOOLS OF MARION, MASSACHUSETTS  
1940.



THEORY

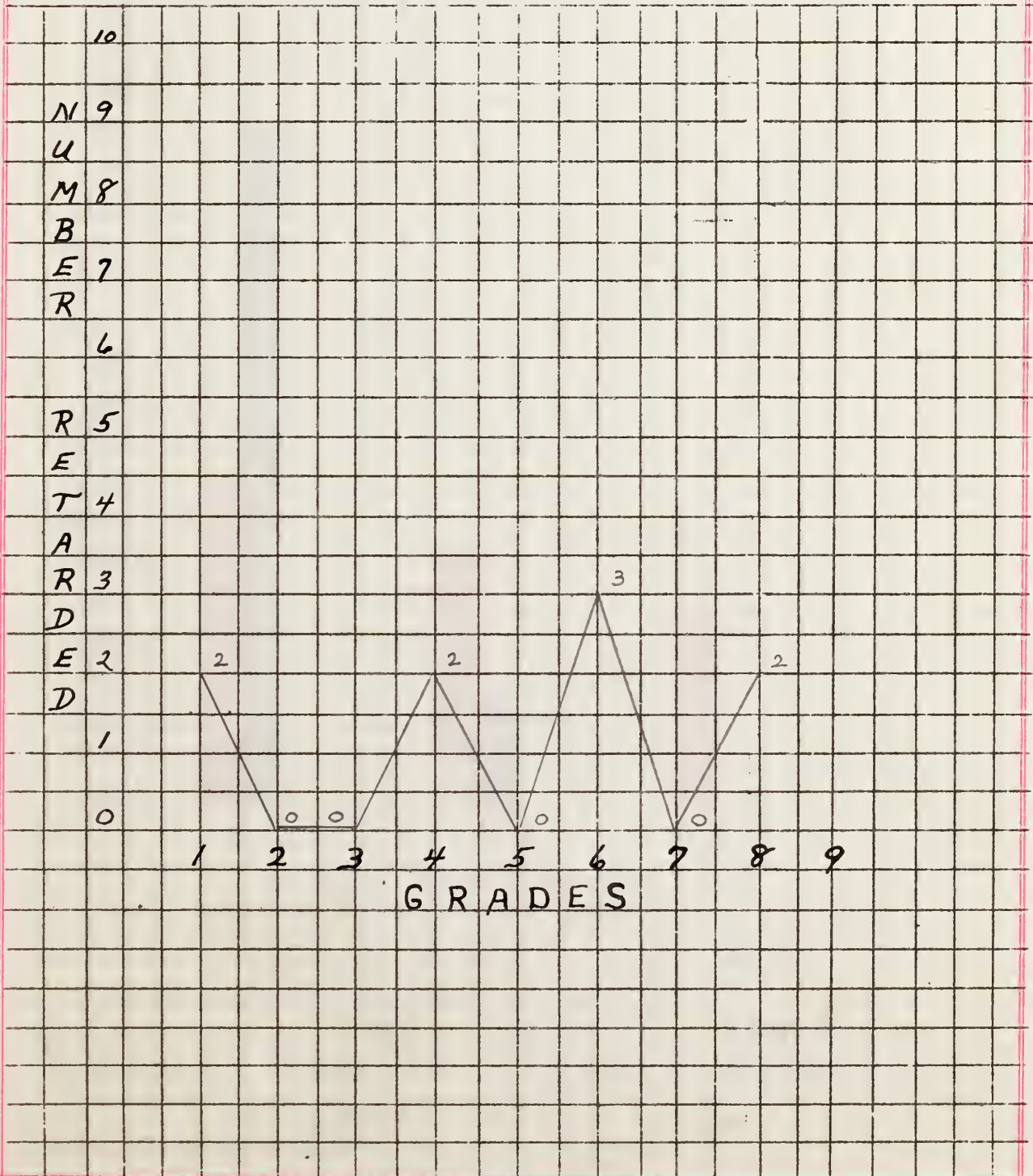
1. The first part of the theory is the definition of the function  $f(x)$  and the domain of definition  $D_f$ . The function  $f(x)$  is defined on the domain  $D_f$  if for every  $x \in D_f$  there exists a unique value  $y = f(x)$ .

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## GRAPH 48

THE NUMBER OF RETARDATIONS AND THE SPECIFIC GRADES IN  
WHICH THEY OCCURRED FOR GRADE 9 IN THE PUBLIC SCHOOLS  
OF MARION, MASSACHUSETTS 1940.

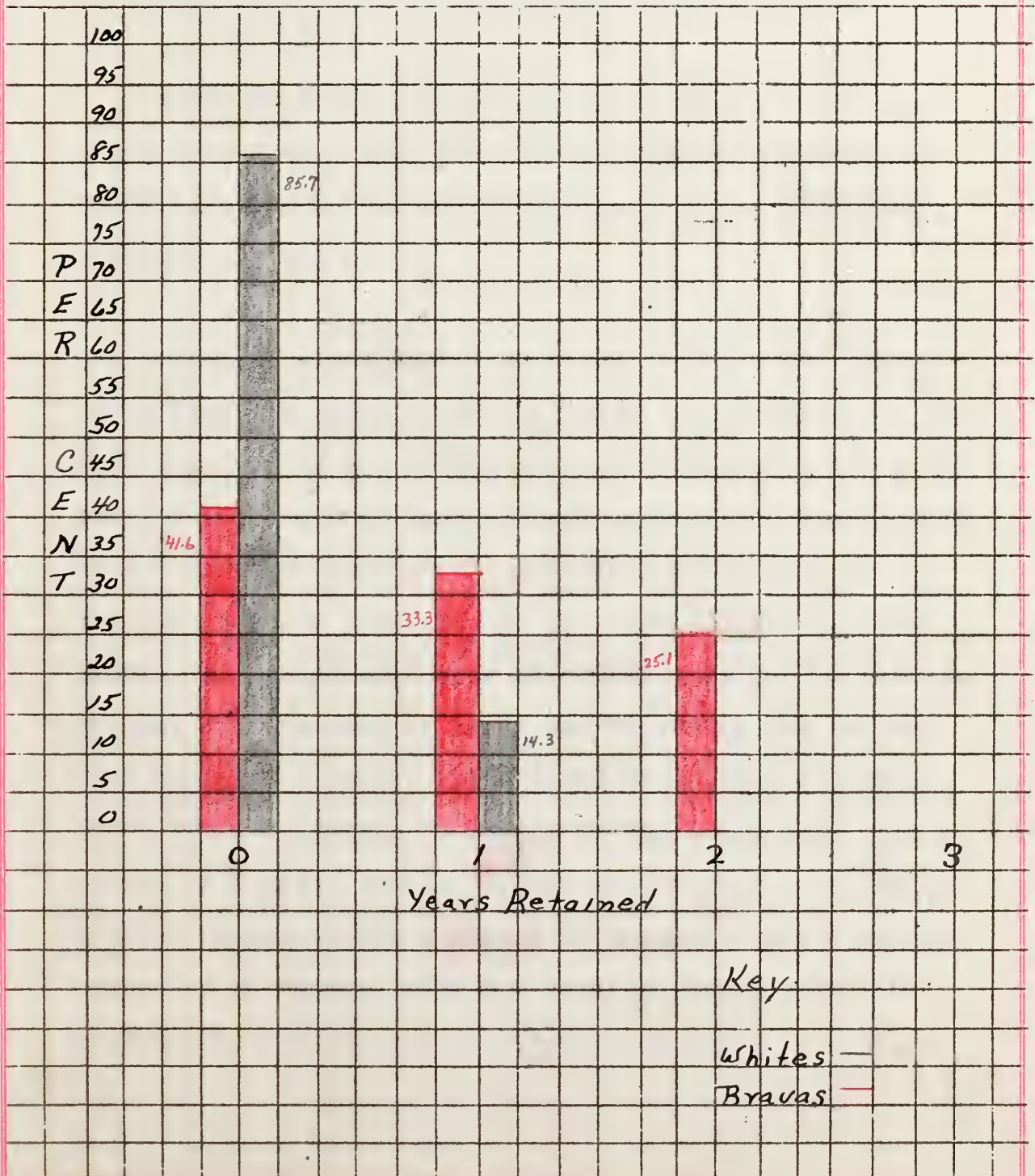






GRAPH 49

THE PER CENT OF RETARDATIONS FOR GRADE 9 IN THE PUBLIC  
SCHOOLS OF MARION, MASSACHUSETTS 1940.







Graph 47 indicates that 65 % of the entire enrollment of grade 9 have never been retained in any grade but that 23 % of the group have failed to be promoted 1 year and 12 % have been retarded 2 years.

Graph 48 indicates that of those people completing grade 9 in June, 1940, the greatest number (3) repeated grade 6, while 2 people repeated each of the following grades, 1, 4 and 8.

Graph 49 shows the percentages of White and Brava retentions for grade 9. Eighty-five and seven-tenths per cent (85.7 %) of the Whites have not repeated a grade in the first 9 years of their school career as compared with 41.6 % for the Brava group, a difference of 44.1 %. Thirty-three and three-tenths per cent (33.3 %) of the Bravas have repeated 1 year as compared to 14.3 % for the Whites, a difference of 19 %, and 25.1 % of the Bravas have repeated 2 years. These statistics point out that there is 19 % greater retention of the Brava group for a period of 1 year, Bravas 33.3 %--Whites 14.3 %, and 25.1 % greater retention for a period of 2 years. Not a single member of the White group was retained for 2 years but 14.3 % of the group was retained for 1 year.





## CHAPTER VIII

### SUMMARY AND CONCLUSIONS.

Over a period of 11 years, 1930--1940, the Brava enrollment has increased gradually, from 63 in 1930 to 121 in 1940. During this period the per cent of Bravas has almost doubled; in 1930 the Brava enrollment was only 25 % of the total membership whereas in 1940 it had risen to 42 % of the total enrollment, thus gradually approaching half the school population.

The average membership for the Bravas in grades 1 from 1930--1940 was 19.8; while the average membership for grade 9 was 2.9, a difference of 16.9 or 85.3 %. The average White membership for grades 1 for the same period was 24.1, while the average membership for grade 9 was 15.5, a difference of 8.6 or only 35.6 %. The average White decrease in enrollment between grades 1 and 9 for the 11 years has been 8.6 or 35.6 % as compared to the average Brava decrease of 16.9 or 85.3 %, a difference of 49.7 %. This indicates that approximately 50 % more Whites than Bravas attain the ninth grade.

The average percentage of failures for the Brava from 1930--1940 was 16 % as compared to an average of 8.7 % for the Whites, almost twice as many failures among the Bravas as among the Whites.

THE  
HISTORY OF THE  
UNITED STATES

The history of the United States is a story of growth and change. From the first settlers to the present day, the nation has evolved through various stages of development. The early years were marked by exploration and settlement, followed by a period of rapid expansion and industrialization. The American Revolution and the Civil War were pivotal moments in the nation's history, shaping its identity and values. The 20th century brought significant social and political changes, including the rise of the American Dream and the challenges of the Cold War. Today, the United States continues to be a nation of diversity and innovation, facing new challenges and opportunities in the 21st century.

The greatest Brava retention takes place in grade 1, 2, 3 and 4; there is little or no Brava retention in grades 7--8. This is due to the fact that few Bravas continue in school beyond grade 6; that is, if they have reached their 16th birthday and have completed the 6th grade, they leave school since this is permitted by the Massachusetts State Laws. There is marked increase in the number of Whites retained in grades 6--7.

In grades 1 the White I Q's are 6.7 scores greater (Whites 95--Bravas 88.3) than the Bravas: 92.1 % of the Whites equal or exceed the average I Q of the Brava, 83.13, while not a single member of the Brava group attains the White mean of 101.25.

In grades 2 the White I Q's are 22.8 scores greater (Whites 105.0--Bravas 82.2) than the Bravas; 83.2 % of the Whites equal or exceed the average I Q of the Brava, 80.60, while not a single member of the Brava group attains the White mean of 101.85.

In grades 3 the White I Q's are 13.12 scores greater (White 88.12--Bravas 75.0) than the Bravas; 90.6 % of the Whites equal or exceed the average I Q of the Brava, 79.00, while only 10 % of the Brava group attain the White mean of 91.45.

In grades 4 the White I Q's are 20 scores greater (Whites 95.0--Bravas 75.0) than those of the Bravas;





89.4 % of the Whites equal or exceed the average I Q of the Brava, 74.50, while only 5 % of the Brava group attain the White mean of 96.81.

In grades 5 the White I Q's are 12.0 scores greater (White 87.50--Bravas 75.50) than the Bravas; 82.5 % of the Whites equal or exceed the average I Q of the Brava, 78.30, while only 29.4 % of the Brava group attain the White mean of 85.33.

In grades 6 the White I Q's are 27.5 scores greater (Whites 102.50--Bravas 75.0) than the Bravas; 97.2 % of the Whites equal or exceed the average I Q of the Brava, 72.30, while not a single member of the Brava group attains the White mean of 99.71.

In grade 7 the White I Q's are 32.0 scores greater (White 97.0--Bravas 65.0) than the Brava; 98.1 % of the Whites equal or exceed the average I Q of the Brava, 70.00, while not a single member of the Brava group attains the White mean of 94.05.

In grade 8 the White I Q's are 20.0 scores greater (Whites 95.0--Bravas 75.0) than the Bravas; 80.8 % of the Whites equal or exceed the average I Q of the Brava, 80.00, while only 33.3 % of the Brava group attain the White mean of 96.6 .

In grade 9 the White I Q's are 18.3 scores greater (White 93.3--Bravas 75.0) than the Bravas; 90 % of the Whites equal or exceed the average I Q of the Brava, 76.25,

1. The first part of the paper is devoted to a general discussion of the problem of the existence of a solution of the system of equations

which is satisfied by the functions  $u(x, y, z)$  and  $v(x, y, z)$  in the domain  $D$  of the space  $E_3$ .

2. In the second part of the paper the existence of a solution of the system of equations is proved for the case when the functions  $u(x, y, z)$  and  $v(x, y, z)$  are assumed to be continuous in the domain  $D$ .

3. In the third part of the paper the existence of a solution of the system of equations is proved for the case when the functions  $u(x, y, z)$  and  $v(x, y, z)$  are assumed to be continuous in the domain  $D$  and to satisfy certain conditions on the boundary of the domain  $D$ .

4. In the fourth part of the paper the existence of a solution of the system of equations is proved for the case when the functions  $u(x, y, z)$  and  $v(x, y, z)$  are assumed to be continuous in the domain  $D$  and to satisfy certain conditions on the boundary of the domain  $D$ .

5. In the fifth part of the paper the existence of a solution of the system of equations is proved for the case when the functions  $u(x, y, z)$  and  $v(x, y, z)$  are assumed to be continuous in the domain  $D$  and to satisfy certain conditions on the boundary of the domain  $D$ .

6. In the sixth part of the paper the existence of a solution of the system of equations is proved for the case when the functions  $u(x, y, z)$  and  $v(x, y, z)$  are assumed to be continuous in the domain  $D$  and to satisfy certain conditions on the boundary of the domain  $D$ .

7. In the seventh part of the paper the existence of a solution of the system of equations is proved for the case when the functions  $u(x, y, z)$  and  $v(x, y, z)$  are assumed to be continuous in the domain  $D$  and to satisfy certain conditions on the boundary of the domain  $D$ .

8. In the eighth part of the paper the existence of a solution of the system of equations is proved for the case when the functions  $u(x, y, z)$  and  $v(x, y, z)$  are assumed to be continuous in the domain  $D$  and to satisfy certain conditions on the boundary of the domain  $D$ .

9. In the ninth part of the paper the existence of a solution of the system of equations is proved for the case when the functions  $u(x, y, z)$  and  $v(x, y, z)$  are assumed to be continuous in the domain  $D$  and to satisfy certain conditions on the boundary of the domain  $D$ .

10. In the tenth part of the paper the existence of a solution of the system of equations is proved for the case when the functions  $u(x, y, z)$  and  $v(x, y, z)$  are assumed to be continuous in the domain  $D$  and to satisfy certain conditions on the boundary of the domain  $D$ .

11. In the eleventh part of the paper the existence of a solution of the system of equations is proved for the case when the functions  $u(x, y, z)$  and  $v(x, y, z)$  are assumed to be continuous in the domain  $D$  and to satisfy certain conditions on the boundary of the domain  $D$ .

12. In the twelfth part of the paper the existence of a solution of the system of equations is proved for the case when the functions  $u(x, y, z)$  and  $v(x, y, z)$  are assumed to be continuous in the domain  $D$  and to satisfy certain conditions on the boundary of the domain  $D$ .

13. In the thirteenth part of the paper the existence of a solution of the system of equations is proved for the case when the functions  $u(x, y, z)$  and  $v(x, y, z)$  are assumed to be continuous in the domain  $D$  and to satisfy certain conditions on the boundary of the domain  $D$ .

while only 12.5 % of the Brava group attain the White mean of 91.70.

To summarize, the average I Q of the total White enrollment exceeds the I Q of the total Brava enrollment by 18.2 scores (White 95.5--Bravas 77.3); 96 % of the Whites equal or exceed the average I Q of the Brava, 74.18, while but 12.6 % of the entire Brava enrollment attain or exceed the average White mean of 95.4.

The Brava group shows constant gradual improvement in Arithmetic Computation always being above the national median, but the White group on the whole shows an improvement of 5 more equated scores than do the Bravas. Again the Brava group shows constant improvement in Arithmetic Reasoning but the achievement of the White group is 4 times that of the Brava; that is, in grades 2 there is a difference of 3 scores as compared to a difference of 12 scores in grade 9. The equated score of the White group is constantly greater than the national median, but the Brava scores are never more than 2 equated scores above and as many as 4 scores below the national median. In Reading, the achievement of the White group is 2.5 times greater than that of the Brava; that is, in grades 2 there is a difference of 8 scores as compared to a difference of 20 scores in grade 9. The Brava shows constant but slow progress. The White group is always at least 5 equated scores above the national median while the Brava group does not exceed the





national median after the completion of the 4th grade and in grade 6 is 7 equated scores below the national median. The White achievement in Language Usage is 2.5 times greater than the achievement of the Brava group; that is, in grades 4 there is a difference of 10 scores as compared to a difference of 25 scores in grade 9. The White group is constantly above the national median, never being fewer than 9 equated scores above while the Brava group is never more than 1 above and as many as 8 equated scores below the national median. The White achievement in Literature is 1.9 times greater than the achievement of the Brava group; that is, in grades 4 there is a difference of 11 scores as compared to a difference of 21 scores in grade 9. The White group is constantly above the national median, never fewer than 5 equated scores above, while the Brava group is never more than 1 equated score above and as many as 13 scores below in grade 6. In Spelling, the White group shows far more improvement (26 scores) in 5 grades than does the Brava group. In grades 4 the White group's score was 41 as compared to a Brava score of 50; but in grade 9 the White group attained a score of 83, while the Brava score was 66. In other words, the White group improved 42 scores and the Brava group improved 16 scores, a difference of 26 scores. The White group is never fewer than 2 equated scores above the national median, while the Brava group goes from 16 equated scores

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above the national median (grades 4) to 2 scores below (grade 9). In the Social Studies both groups are above the national median in grades 4 (Bravas 5 scores--Whites 5 scores) but in grade 9 the White group is 7 equated scores above the national median while the Brava group is 12 scores below; that is, the White group improves 19 times more than does the Brava in 5 grades. The White children make their greatest progress in grades 7-8-9 while the Bravas make little or no progress but improve the most in grades 5 and 6 and reach a plateau in grades 7,8 and 9. The White group shows gradual improvement in Elementary Science and is constantly above the national median never being fewer than 4 equated scores above. The Brava group is below the national median except in grade 4 when they are 8 scores above the national median. The average equated score for all the Bravas of grades 3 is 22, 16 equated scores below normal, as compared to the average equated score of all the Whites, 30, 8 scores below the standard for the grade. Thus, the average equated score of the Brava is twice as far below the standard average equated score as is the average equated score of the White. The average equated score for all the Brava members of grades 6 is 39, 39 equated scores below normal, as compared to the average equated score established by the White members of the grade, 63, which is 15 scores below the standard for the grade. In other words, the average equated score as established





by the Brava group is 2.6 times farther below the standard average equated score. The average equated score for all the Brava members of grade 9 is 61, 37 equated scores below normal, as compared to the average equated score established by all the White members of the grade, 75, which is 23 scores below the standard for the grade. In other words, the average equated score as established by the Brava group is 1.6 times farther below the standard average equated score.

An analysis of the Reading marks indicate that the Brava has difficulty in mastering the subject. In grades 3, 14 % failed as compared to 20 % in grades 6; 6 % more failed in grades 6 than failed in grades 3. In the third grades, 43 % got C's while in grades 6, 40 % attained the same mark. Forty-three per cent (43 %) got B's in grades 3 as compared to 30 % in grades 6, while 10 % of the Brava group received A's in grades 6. No one in either the White or the Brava group received the mark of A in grades 3. In grades 3, 10 % more Bravas failed than did Whites, Bravas 14 %--Whites 4 %, while in grades 6, 15.1 % more Bravas received a similar mark, Bravas 20 %--Whites 4.9 %, than did the White group.

Spelling is a strong subject for the Brava group. In grades 3, 14 % received a mark of C but in both grades 6 and 9 the lowest mark attained was a B. The number of A's received further supports the above statement: in



grades 3, 43 %; grades 6, 70 % and in grade 9, 62 %. In grade 9 there is 100 % Brava representation in the A-B group as compared to only 86 % in grades 3, an improvement of 14 % in 6 grades. Likewise, in grade 9 the Brava group lacks representation in the C-F group as compared to 14 % in grades 3, a decrease of 14 % in 6 grades.

An analysis of the English marks indicates a slight improvement (10%) in the mastery of English by the Brava group in grades 6 and 9 respectively. In grades 6, 10 % failed or received a mark of F, while in grade 9 no one received a mark lower than C. Thirty per cent (30 %) of the Bravas received B's in grades 6 as compared to 46 % in grade 9 but 6 % more received C's in grades 6 (60%) than in grade 9 (54 %). In grade 9 there is 10 % greater representation (100%) in the B-C group than in grades 6 (90%). There is 16 % greater Brava representation in the C-F group in grades 6 (70 %) than there is in grade 9 (54%).

As the Brava progresses from grades 3 to 9 respectively, the statistics as to the marks attained in Arithmetic indicate improvement. In no instance is there an indication of a Brava receiving an A. In grades 3, 29 % failed (F) while not a single member of the group attained a similar mark in grade 9. In the third grades, 71 % of the group were represented in the B-C bracket as compared to 70 % in grades 6 and 100 % in grade 9, an improvement of 29 % in 6 grades. Likewise, in grades 3, 86 % of the group



The first part of the paper discusses the importance of the study and the objectives of the research. It also mentions the scope of the study and the limitations of the study.

The second part of the paper discusses the methodology used in the study. It mentions the data sources and the data collection methods. It also mentions the data analysis methods used in the study.

The third part of the paper discusses the results of the study. It mentions the findings of the study and the conclusions drawn from the study. It also mentions the implications of the study and the recommendations for future research.

were represented in the C-F bracket as compared to 60 % in grades 6 and 70 % in grade 9, a decrease of 16 % in 6 grades.

Art and Handwork is one phase of the school work in which the Brava excels; as he progresses, he gradually becomes more efficient. In neither grades 6 nor 9 is there evidence of Brava failure. In the sixth grades approximately 4 times as many Bravas as Whites received a mark of A, Bravas 40 %--Whites 9.5 %; a similar condition exists in grade 9, Bravas 46 %--Whites 29 %. In grades 6, 20 % of the group received a mark of C as compared to 8 % in grade 9, an improvement of 11 % in 3 years. Eighty per cent (80%) of the Brava group received either A's or B's in grade 6; 86 % were in a similar group in grade 9, indicating an improvement of 6 % in 3 years.

An analysis of the Social Studies marks indicate that the Brava has difficulty in mastering the subjects. In Geography, 30 % or  $\frac{3}{10}$  got B's; 50 % or  $\frac{1}{2}$  got C's and 20 % or  $\frac{1}{5}$  of the Bravas failed. In History, not a single member of the group received an A, 40 % or  $\frac{2}{5}$  failed (F) and 70 % or  $\frac{7}{10}$  were in the C-F group.

1. The first part of the paper is devoted to a general discussion of the problem of the existence of a solution of the system of equations

which is satisfied by the functions  $u(x, y, z)$  and  $v(x, y, z)$  in the domain  $G$  of the space  $E_3$  bounded by the surface  $S$ . It is shown that the system of equations is solvable in the domain  $G$  if and only if the functions  $f(x, y, z)$  and  $g(x, y, z)$  satisfy the conditions

which are necessary and sufficient for the solvability of the system of equations in the domain  $G$ . It is also shown that the functions  $u(x, y, z)$  and  $v(x, y, z)$  are uniquely determined by the functions  $f(x, y, z)$  and  $g(x, y, z)$  in the domain  $G$  if the functions  $f(x, y, z)$  and  $g(x, y, z)$  satisfy the conditions

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which are necessary and sufficient for the solvability of the system of equations in the domain  $G$ .

CHAPTER IX  
RECOMMENDATIONS.

Approximately 75 % of the Brava students who enter school never reach the ninth grade; more than 40 % of those who begin the first grade leave school by the time the seventh grade has been completed. Of those who graduate only a very few, approximately 15 %, continue in higher schools of learning. Therefore, most of the time spent in grades 7-8 and 9 is spent in preparing for a future education which is never considered by the Brava group.

The large percentage of students leave school for many reasons, including failure in school work, poor health, lack of correlation between school work and socially chosen occupations and lack of interest. In order to assist in the solution of the Brava problems as mentioned above, schools should broaden the exploratory opportunities for students and improve their guidance programs to give a wider base for intelligent selection and a better preparation for effective participation in future life situations.

The Brava has definite social needs and requirements. The following reasons may be considered as a basis for the widespread concern about the Brava problem as it exists at the present in the schools of Marion, Massachusetts:

1. The increased Brava enrollments have brought into





the schools large numbers of students of relatively low ability whose best interests do not seem to be served by the old academic curriculum.

2. The average I Q of the Brava members of the school population is 77.

3. The preparation of students for high school can no longer be recognized as the primary objective, since only 15 % of the Brava pupils go beyond the ninth grade.

4. There is a growing demand that the schools increase the emphasis on preparation for the making of a living and on training for more effective adjustment to adolescent and adult responsibilities.

5. The increased difficulties encountered by the youth in securing employment have caused many parents to express a desire for a more intensive vocational program.

Since we are primarily concerned with the educational problems of the Brava, these suggestions and recommendations are made in his behalf:

1. Possibly the situation might be improved by the introduction of a pre-primary class. If such a class were introduced, the mental age at entrance might be brought nearer to six. Since it has been quite definitely determined by experiment that a child cannot learn to read until he is six years old mentally, it follows that the nearer the child is to that mental age the more satisfactory the results are likely to be. The environmental



home conditions of the Brava are such that under existing circumstances he lacks even the simplest basic ideas known to even the lowest White child.

2. Homogeneous grouping has its possibilities; it is not synonymous with ability grouping but is reduced heterogeneity or refined classification. It is a democratic form of classification based on interests, aims or needs and serves best those pupils decidedly below average in their ability to do the work of the grade.

3. Special classes would be of great assistance since they begin where homogeneous grouping leaves off. The instruction is largely individual. These classes are for the mentally inferior, not for those who are below grade because of absence, physical condition or for any other reason except inferior mentality. The purposes of the special class instruction for these pupils are:

a. To give each pupil as much of the standard curriculum as he can take with reasonable effort.

b. To give more work of a manual nature than he can be given in regular classes.

c. To discover and to train any special ability the child may show which would enable him to become a useful member of society.

d. To instill proper attitudes towards problems of citizenship and towards life in general.





4. Modified methods in connection with the regular grade work of those pupils not in the special classes offer possibilities for those needs of the inferior Brava which cannot be met merely by electives or by reducing the number of subjects carried.

The school personnel might:

- a. Emphasize the applied aspects of their subjects.
- b. Substitute natural situations for formal class room procedures.
- c. Utilize that subject matter which can be usable in one's future undertakings.
- d. Recognize to a greater extent the educational values of actual work by pupils.
- e. Offer more complete programs of training in health habits and social adjustment.
- f. Depend less on the single text book and emphasize more field trips, projects and community undertakings.
- g. Utilize personal experiences as a basis for motivation.
- h. Emphasize more in English courses the services such courses might render to other courses or to real life situations.
- i. Emphasize more the recreational phases of physical educational.

5. The old general cultural courses should be revised to include new materials. The following suggestions have



possibilities:

- a. More practical arithmetic and less algebra.
  - b. More hygiene and less anatomy.
  - c. More ethics and less theology.
  - d. More constitutional law and less Roman.
  - e. Increased emphasis on music, especially instrumental music since it gives opportunity for both individual and group activity.
  - f. Increased emphasis on certain phases of the social studies, especially those relating to community problems, civics and state and local government.;
  - g. More courses in consumer education.
  - h. More exploratory courses in household science and art.
  - i. Having as part of the regular school work certain activities now regarded as extra-curricula.
  - j. Offering one or more courses in leisure reading according to student interests.
  - k. Increased emphasis on vocational and industrial courses of an exploratory nature.
6. Some form of vocational and educational guidance should be introduced to enlighten the Brava as to how his school work will fit him for the work that he will do in later life. The school should then train him along those lines for which he is best fitted. Since so few of the Bravas go on to high school probably the greater number





should not be taught the regular college preparatory work but should be given work in such courses as practical manual training or domestic arts.

7. The foregoing suggestions have been made in behalf of those Bravas who constitute the school population at the present time; but since the primary obligation of the school is to provide a program for every citizen, some form of adult education should be inaugurated. It should train the individual in civic, social and political responsibilities, imbue him with the idea and ideals of moral worth, make it possible for him to adjust himself socially and economically and make him both willing and able to contribute his best to society in each of these fields. An adult educational program could well meet the needs and desires of the Brava population of Marion, Massachusetts, since the parents of the Brava are either poorly educated or illiterate. Keeping in mind the fact that although the Brava has difficulty in academic subjects, he does possess potential possibilities in the tool and mechanical subjects, it would seem that a special adult program has possibilities. General instruction could be offered in Americanization classes, which could include the social, political and moral aspects of community affairs for an adult mixed group. Special instruction could be offered for women and girls in home nursing and hygiene, sewing, dressmaking and cooking as well as in any other subjects in which a



majority showed an interest. Vocational courses could be offered for the men and boys in agriculture, wood working, electricity, plumbing and possibly general auto mechanics. Instructors for these courses need not be regular trained teachers but could be local talented trades-men and the facilities as they now exist would furnish a means for a beginning. It is understood that such a program costs money and that the present trend is to limit the school budget to mere necessities. The following is a brief summary of public welfare for the years 1935 and 1940 in the town of Marion, Massachusetts:

Public Welfare ---1935

- a. Number of Brava cases---55.
- b. Number of persons represented---175.
- c. Average expenditure per person---\$50.68.
- d. Total expenditure---\$8,869.00.

Public Welfare ---1940 \*

- a. Number of Brava cases---39.
- b. Number of persons represented---152.
- c. Average expenditure per person---\$42.18.
- d. Total expenditure---\$6411.36.

\*(Note---These figures do not include the greatly increased Federal Aid; stamp plan, surplus commodities, etc.)  
If part of the money appropriated for welfare could be used to sponser such an adult program, the results would well be worth the time and money expended since gradually the





number of welfare cases among the Bravas would be lowered. Over a period of years the Brava group, which constitutes approximately 40 % of the total population, would be better qualified to earn a living, improve their living conditions and render valuable services as citizens of Marion, Massachusetts.

1. The first part of the document is a letter from the President of the United States to the Congress, dated January 1, 1801. It is a very important document, as it is the first official communication of the new administration. The President, James Madison, discusses the state of the Union and the challenges facing the new government. He also mentions the recent election and the transition of power from John Adams to himself.

2. The second part of the document is a report from the Secretary of the Treasury, James Callaghan, dated January 1, 1801. It provides a detailed account of the financial state of the United States at the time. The report discusses the national debt, the state of the treasury, and the various sources of revenue. It also mentions the various expenditures of the government and the measures being taken to improve the financial situation.

3. The third part of the document is a report from the Secretary of the Navy, John Jay, dated January 1, 1801. It provides a detailed account of the state of the Navy at the time. The report discusses the various ships in the fleet, the state of the arsenals, and the measures being taken to improve the Navy. It also mentions the various operations of the Navy and the measures being taken to protect the coast.

4. The fourth part of the document is a report from the Secretary of the War, Henry Dearborn, dated January 1, 1801. It provides a detailed account of the state of the Army at the time. The report discusses the various regiments in the Army, the state of the arsenals, and the measures being taken to improve the Army. It also mentions the various operations of the Army and the measures being taken to protect the frontier.

5. The fifth part of the document is a report from the Secretary of the Interior, Thomas Mifflin, dated January 1, 1801. It provides a detailed account of the state of the Department of the Interior at the time. The report discusses the various lands owned by the United States, the state of the various territories, and the measures being taken to improve the Department. It also mentions the various operations of the Department and the measures being taken to protect the interior.

## BIBLIOGRAPHY

1. "Cape Verde Islands--Vanished Continent." Scientific American Supplement, LXXII (November, 1911), p. 291.
2. Case, Clarence Marsh. An Outline of Introductory Sociology, chapter XXXVI. New York: Harcourt, Brace and Company.
3. Cook, Catherine M., and Reynolds, F.E. The Education of Native and Minority Groups. A Bibliography 1923--32. United States Office of Education Bulletin No. 12, 1933. 57 pp.
4. Crane, W.E. "Sons of the Azores on Cape Cod." Illustrated Travel, LXIX (September, 1937), pp.23--25.
5. Doubleday Encyclopedia. Vol. 3, p. 32. New York: Doubleday, Doran and Company Inc., 1939.
6. Encyclopedia Americana. Vol. 5, p. 549. New York: Americana Corporation, 1940.
7. Encyclopaedia Britannica. 14th. ed., Vol.4, p. 791. New York and Chicago: Encyclopaedia Britannica Inc., 1937.
8. Green, M.J. "A Problem of Negro Education with Respect to Withdrawls and a Curriculum for Vocational Fitness." Unpublished Ed. M. Thesis, Boston University, 1934.
9. Hill, Harry S. "Correlations Between I Q's of Bilinguals at Different Ages." School and Society, XLIV (July 18, 1936), pp. 89--90.





10. Johnston, H.H. "Portuguese Colonies." 19th Century, LXXI (March, 1912), pp. 497--501.
11. Jones, C.E. "Guidance in Cape Cod Secondary Schools." Unpublished Ed. M. Thesis, Boston University, 1933.
12. Long, G.J. "Portuguese of Wareham, Massachusetts." Unpublished Ed. M. Thesis, Boston University, 1940.
13. New Bedford Standard Times, New Bedford, Massachusetts. July 29, 1905, Editorial by Cooper Gaw.
14. "Portuguese in America." Literary Digest, LXIII (November 22, 1919), p.40.
15. Simmons, George Finlay. "Cape Verde Islands---Atlantic Ocean, Sindbads of Science." National Geographic, LII (July, 1927), pp.1--75.
16. Statesman's Year Book. 1938, pp. 1249--1250.
17. Taft, D.R. Two Portuguese Communities in New England. New York: Columbia University Press, 1923. 109 pp.
18. Town Reports of Marion, Massachusetts. 1930--1940.
19. Vorse, M.H. "Portuguese of Provincetown." Illustrated Outlook, XCVII (February 25, 1911), pp. 409--416.

The first part of the paper discusses the importance of the study and the objectives of the research. It also provides a brief overview of the methodology used in the study. The second part of the paper presents the results of the study and discusses the implications of the findings. The third part of the paper concludes the study and provides some suggestions for future research.

The study was conducted using a quantitative research design. Data was collected from a sample of 100 participants. The results of the study show that there is a significant relationship between the variables studied. The findings suggest that the study has important implications for the field of research.

In conclusion, the study has shown that the variables studied are significantly related. The findings have important implications for the field of research. Further research is needed to explore the relationship between the variables in more detail.

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